

small air forces observer

vol. 28 no. 2 (110)
October 2004

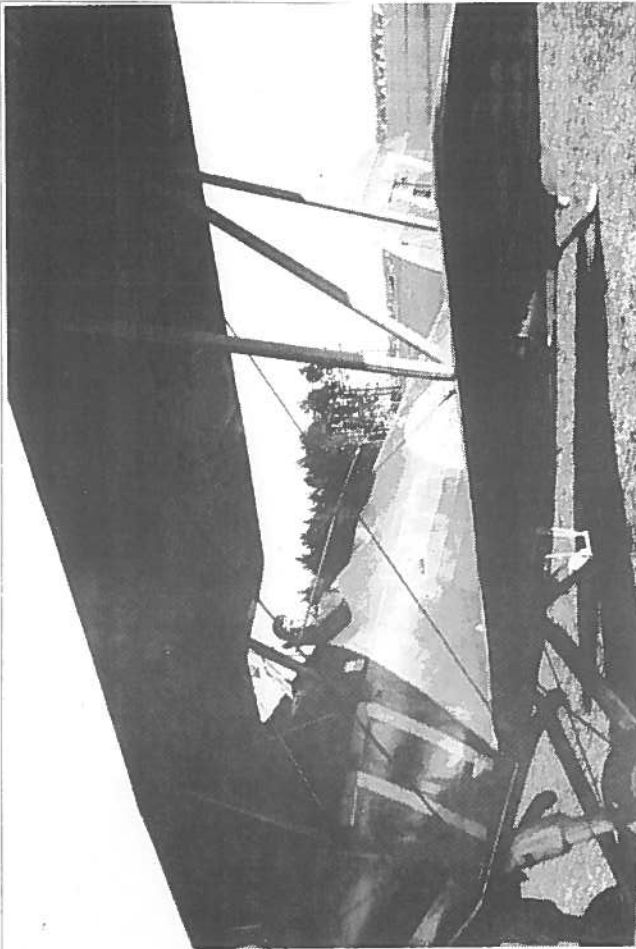
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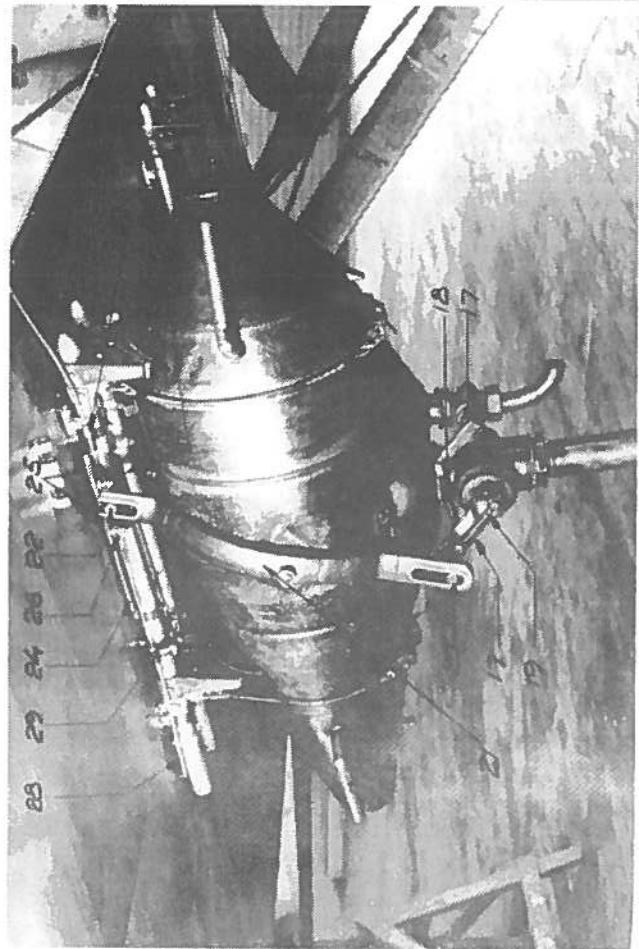
Dutch Air Arms in Combat: 10 May 1940
Piper Cubs in War Paint
Estonian Harts
Swedish Harts

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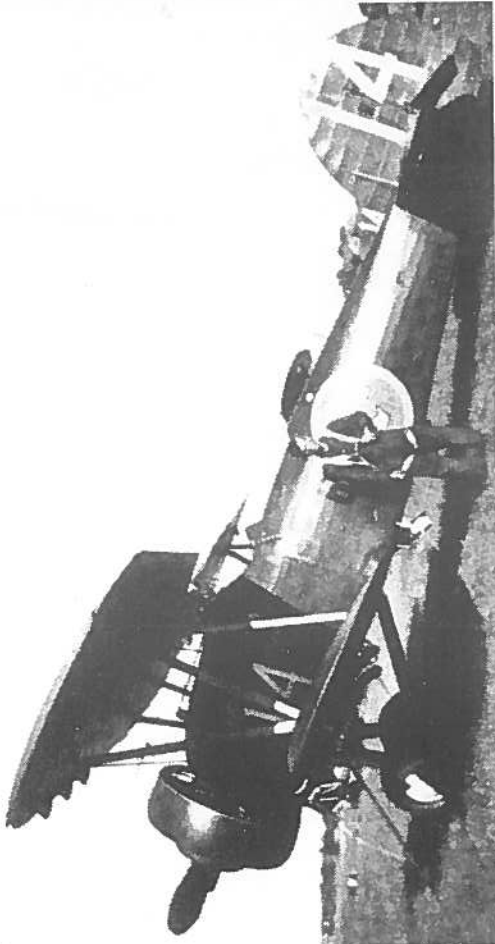
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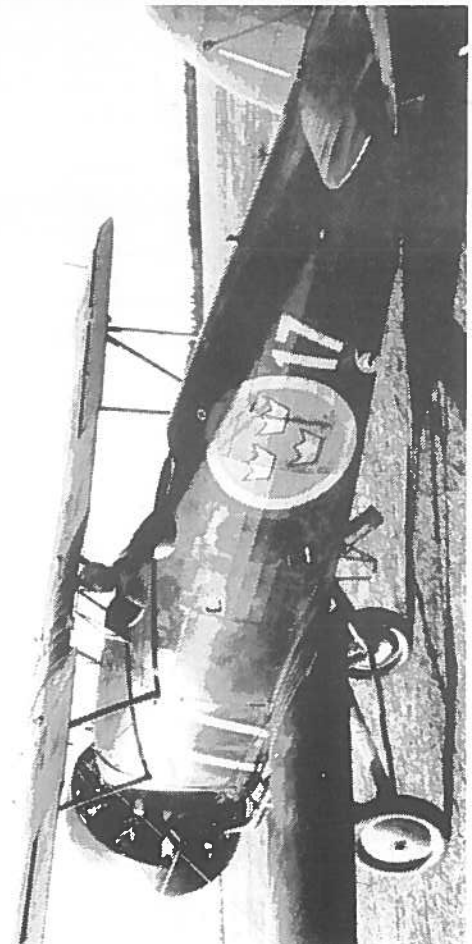
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SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House
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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

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SAFO is distributed in England by Midland Counties Publications, 4 Watling Drive, Skethley Lane Industrial Estate, Hinckley, Leics. LE10 3EY. Additional distributors in other countries would be most welcome.

SMALL AIR FORCES OBSERVER (USPS 439-450) is published quarterly for \$16.00 per year by the Small Air Forces Clearing House, 27965 Berwick Dr., Carmel, CA 93923. Publication entered at Carmel Valley, CA 93924. POSTMASTER: send address changes to Small Air Forces Clearing House 27965 Berwick Dr., Carmel, CA 93923.

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GUEST EDITORIAL: It is my opinion that the historian's first responsibility is attention to detail. That simple belief is the primary reason that I have been a supporter of SAFO for many years, and I would wager that many of you reading this feel the same way.

After barely more than 100 years, there is an awful lot of aviation history yet to be recorded. On the surface of it, one might feel that we are doing a reasonably good job. However, it is the writer's opinion that we are in jeopardy of blowing it. Until about 10 years ago, I would say we were on the right track. Then something happened: the internet. Hailed as a boon to humanity, the internet is now starting to emerge as the arch enemy of historical recordation. Let me try to explain.

Four years ago, this writer entered into contracts to produce four new books relating to the history of various aspects of aviation in Latin America. The publishers all agreed that the subject matter broke new ground and they were willing to pledge to actually publish the books. To date, not one of these books, despite contractual obligations, has emerged, although one is finally close. At first, this was viewed as an aberration. However, conversations with other practicing aviation historians revealed that they, too, were experiencing a strange hiatus.

Although few of them are talking about it, the big-time book dealers are in trouble. I don't need to name them, they are splashed all over your local strip malls. They are not paying their bills - to the self-same publishers - and books aren't being published. The culprit? The internet, or at least so they say on the street.

The internet has indeed fostered wonderful invention. The Latin American Aviation Historical Society (LAAHS), of which this writer is a proud original member, and countless other avhistory websites, offer literally hundreds, if not thousands of artfully constructed, colorful outlets for virtually anyone who has a few dollars and the time to erect one of their own. It has enabled nearly instantaneous communication amongst otherwise isolated and solitary enthusiasts all over the planet, and that has been an extremely good thing for all of us.

But there is, indeed, a dark side. It is, at the root of it all, an enormous, endlessly rapacious beast that holds every promise of completely demolishing the concepts of veracity and copyright. An example: a site that will remain nameless, literally lifted every image from one of my books and deposited it in their web site as their own creation, without so much as a word. Learning of this, I objected - only to be greeted by indignation and the statement that U.S. copyright laws did not apply in their nation!

To add insult to injury, the same images were then lifted from that web site and published in a conventional publication in yet another nation - and credited to the author of that publication!

If it were merely copyright that were at issue here, the lawyers could eventually sort that out. But it isn't. What it really boils down to is that conventional publishers now fear that the internet threatens the very survival of conventionally published works as we know them. And that is why the numbers of new aviation history titles have dropped off precipitously and, indeed, may be in total fear of extinction.

As some of you may know, my "day job" is as Research Team Leader at the National Air and Space Museum at the Smithsonian, where we have lately been grappling with digitization and how to make use of it to benefit researchers. During the past 12 months, and for the first time in 16 years, the numbers of research inquiries, which had been rising each year previously, have dropped off. We are in disagreement as the reasons for this, but it is unprecedented in the more than 29 year history of NASM. My own personal belief is that it is due to the wide-spread acceptance and embracing of the internet as the ultimate source of answers to all things.

Finally, there is the issue of verification. I can lead you to the site of a "Museum" that has gained international following, and, if you were to view the site and its various functions, which are extremely artfully crafted, you would find it both informative and amusing. However, it is a complete and utter fiction: it simply does not exist. And that, when all is said and done, is the difference between a book that you can hold in your hands and the internet. A book can be challenged, the author questioned and reviewed objectively; the internet is utterly out of reach, anonymous and unchallengeable in most cases.

I have often described this Instrument of the Devil on which I am writing this as nothing more than a sophisticated typewriter. However, that is a generational viewpoint. My grandchildren will grow up to believe that computers and the internet are the real stuff, and that bodes extremely ill for recorded aviation history as we know and love it.

My solution, for myself, is simple: I will continue to try to record aviation history conventionally, and while I will continue to support certain web sites as venues for exchanges of information, I will refrain from publishing on the web. I will make use of e-mail as an inexpensive and rapid form of communication, but I will not contribute historical content to any web site. I encourage all of you to examine this question and ask yourself which you prefer: a truly well-crafted book, like Bob Parmerter's magnificent new Beech 18 tome, that you can hold in your hands, or scrolling down endlessly while burning your eyeballs out in front of a monitor?

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AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A\$27; air mail A\$30).

1-04 (24 pages) "Painting and Finishing" 2 pages. "Anzac Harriers" a 4-page 'what-if' article including 8 side-view drawings of RAAF & RNZAF Harriers. "Netherlands East Indies 1941-1942" one page including 3 side-view drawings [Curtiss-Wright CW-21B (2) & CW-22]. "Czech Liberators" one page including a side-view drawing. "Son of Air America" 2 pages including 3 side-view drawings (Mi-8).

2-04 (24 pages) "Netherlands East Indies 1941-1942" 2 pages including one photo [Martin 139 (model)] and one side-view drawing (Lockheed 212). "Aircraft Engine Detailing" 3 pages including a page of sketches. "Meteor Shower" 6 pages on building 1/72-scale models of all the Meteor variants including 4 photos of models and a 2-page table detailing the difference among the various variants from F1 to NF(T)14. "Meteor Target Tugs" 3 pages including 7 photos of the real thing.

AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, fenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

2/04 (40 pages) "Die ungaris Fliegertruppe van 1918 bis 1919" 16 pages on the Hungarian air arms immediately after WWI including 7 photos and 4 scale drawings (Red Hungarian Phoenix C.1 & Brandenburg W.29, and Hungarian UFAG C.1 & Phoenix C.1). [Ed: A marvelous article. I will try to get permission to publish a translation in SAFO.] "PKZ-2" 3 pages on the 1918 Austrian observation helicopter including one photo and a scale drawing.

BRAZIL

REVISTA (IPMS Brazil, A.O. Linares Neto, Rua Oto de Alencar 26, apt 308, Tijuca - Rio de Janeiro, 20271-220 RJ) E-mail: ipmsbrasil@ieg.com.br
#109 Marco 2004 (16 pages) "O Caproni Ca.45" 4 pages including 4 photos and a one-page 3-view drawing. [Ed: There are no markings on the 3-view and only one of the photos (poorly reproduced) appears to be of the a/c in Brazilian service. The same photo, but a better reproduction, appears in *Aviacao Militar Brasileira 1916-1984* by Francisco C. Pereira Netto. 1/72-scale drawings of the Caproni Ca 5 can be found in *Harlyford's Reconnaissance and Bomber Aircraft of the 1914-1918 War*.] "O Navio-aerodromo ligeiro Minas Gerais" 5 pages including 3 photos of the model and scale drawings of the aircraft carrier before and after conversion to an angled deck. "Um T-6 portugues" a one-page 4-view drawing of the a/c in a colorful color scheme.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B. Ottawa, Ontario K1P 5R7; 6 issues for US \$24.00 in US \$26.00 elsewhere).

28/6 (20 pages) "Building a Canadian Hurricane Mk. XII in 1/48 Scale" 5 pages including 8 photos of the model (2 in color) and 3 photos of the real thing without spinners. "How to Paint Rings on Aircraft Bombs in Any Scale" 4 pages including 13 photos. "Canadian Sabre Swan Song: Modelling a US Army QF-86F in 1/72nd Scale" 3 pages including 8 photos (2 in color) of the model in various stages on construction.

DENMARK

NYT (IPMS Denmark, c/o Lars Seifert-Thorsen, Guldregnevvej 4, 4600 Koge. 4 issues for 260 Dkr). Each issue includes a two-page English summary. Web: www.ipms.dk

#103 (40 pages) "Hunter T.Mk.53 in RDAF Service" 12 pages including 14 photos of 'ET-272' (4 in color) and 4 pages of multi-view scale drawings for the F.Mk.51, T.Mk.53, & T.Mk.7 in RDAF markings. [Ed: All the annotations on the drawings are in both Danish and English, but they are hard to read because of the resolution used in scanning the originals. The computer "revolution" is, indeed, a mixed blessing.]

#104 (40 pages) "721 Squadron moved to Aalborg Air Base on March 1st" 7 pages including 12 photos (C-130, T-17, & Challenger) 4 in color. "Danish Fighter Ace Kaj Birksted and his Spitfires" 2 pages including 3 photos. "Seafire F.Mk.47 in 1:32 scale" 3 pages including 4 photos.

ENGLAND

THE CATALINA NEWS (Val Thomas, The Catalina Society, Duxford Airfield, Cambs, CB2 3QR, England. One year £15. Web Site: www.davidlegg@pyb5.fsnet.co.uk. E-Mail: david_legg@lineone.net)

#56 May 2004 (24 pages) The delivery flight of the Society's Catalina from British Columbia, Canada, to Duxford, England, is described in 11 pages including 19 photos. The usual sections on Letters, Reviews, and News occupy 10 pages and includes 7 photos.

MUSHROOM MODEL MAGAZINE (Roger Wallsgrove, 36 Ver Road, Redbourn, Herts AL3 7PE, UK. £3.95 each.. (North American subscription agent: Wise Owl Publications, 5150 Candlewood St., Suite #1, Lakewood, CA 90712-1900. \$32.00. E-mail: info@wiseowlmagazines.com.

8/3 (28 pages) "Arado Ar 65 in the Bulgarian Air Force" 4 pages on building the RS kit and scratch building a second Ar 65 including 11 photos of the Bulgarian Ar 65, 2 color side-view drawings, and 6 photos of the model (2 in color), a small 3-view drawing, and a sketch showing how to convert the 1/48-scale Hawk RC3 into a 1/72-scale Ar 65. "The Magnificent Mars" 6 pages plus a double page folded insert including 21 color photos, 8 b&w photos, and multi-view 1/144-scale drawings "Hot Off the Workbench" 11 pages including 19 photos (Special Hobby's Fairey Firefly Mk.I, SB2U Vindicator, Vultee Vengeance, & Spitfire X; Azur's CAMS 37; Czech Master's Westland Wilkin; Mac's Spad 7; MPM's Douglas DB-8A, Unicraft's IAe 38 Naranjero (orange crate), and many other shorter reviews.

SWEDISH AIRFORCE SIG (Harold Rowell, 80 Cambridge Ave., Marton, Middlesbrough, Cleveland, TS7 8EG, England. E-mail: pauline.rowell@ntlworld.com. Subscription £4.00 UK, £6.00 Europe, £9.00 USA.

#48 Spring 2004 (8 pages) "A Brief History of Swedish Aviation" 2 pages. "Junkers Ju 86" 2 pages of sketches of interior details. "Swedish Army Scottish Aviation Bulldog" one page with a 4-view scale drawing.

FINLAND

FINNISH AIR FORCE SIG, c/o Nils R. Treichel, Grosser Platz 4, 27432 Bremervoerde, Germany.

Entirely in English.

No. 22 (10 pages) "A Touch of Color: The RVHP Letov S-218 Smolik" A one-page kit review. "A Delayed Floatplane (Part 2)" 4 pages on the Finnish Ripon including 6 side-view drawings and 2 top view drawings. "Rescue Choppers" 2 pages on MediHelo's Bo-105CBS including review of the Legato 1/72-scale resin kit and 3 side-view drawings of chopper in Finnish civil markings. "Be Prepared" a one page notice of upcoming release by Pegasus of a 1/72-scale kit of the Martinsyde Buzzard with 3 side-view drawings of a/c in Finnish markings.

IPMS-MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs). Now with captions in English.

#153 2/2004 (16 pages) "Borje Hielm in Memoriam". Otherwise nothing of small-air-force interest.

SUOMEN ILMAILUHISTORIALLINEN LEHTI (InScale 72, Jakomaentie 8bC 300, FIN-00770 Helsinki. Subscription: Europe \$25, elsewhere \$30; Payment by International Postal Order or in cash; no cheques accepted because of high redemption rates). Each issue includes a 2-page English summary.

2/2004 (24 pages) "History of the Short-Lived T-LLv 25" 5 pages including 4 photos and a 1/72-scale 5-view drawings of the VL Pyry. "Note: The 'T' identifies a 'Replacement' squadron, while the T without the dash, as in TLeLv 12, identifies a 'Reconnaissance' squadron." "LeLv 32 in Action 1940-42 (Part 6)" 3 pages including one photo (Curtiss Hawk). "Junkers K 47 Tested at Utti in 1933" 2 pages including one photo (SE-ADL) and a small 3-view drawing. "Nieuport Aircraft in Finland 1918-23 (Part 1)" 3 pages including 2 photos. [Ed: one photo shows a Nieuport 10 and a 21 of the 'Red Finnish Air Detachment' at Tampere, March 1918. These aircraft still carry the Imperial Russian roundels. Any comments?]. "Night Fighter Operation in Finland 1943-54 (Part 7)" 6 pages including one photo (Bf 109G-6). "Performance of Piston Engine Fighters (Part 1)" 4 pages including one photo (Bf 109G-6) and 5 graphs of the 'standard atmosphere' (pressure, temperature, density, and viscosity as function of altitude) used in specifying aircraft performance.

FRANCE

AIR MAGAZINE, TMA, 75 rue Claude Decaen, 75012 Paris, France. Six issues a year. 35 euros in France, 41 euros in Europe, and 50 euros for the rest of the world. Payment by Visa, Eurocard, Mastercard. E-mail: airmagazine@wanadoo.fr.

#19 Avril/Mai 2004 (64 pages) "Potez 63-11" 21 pages including 42 photos, a 2-pages cutaway drawing, a 2-page 4-view 1/72-scale drawing, three color 3-view drawings (French 1940, French Fighter Flight with RAF roundels, & Romanian), and 22 color side-view drawings [French (15), German (2), Romanian (1), Hungarian (2), Spanish (1), & Italian (1)]. "Souvenirs de Jean Gaillard: Pilote de Potez 63-11" 9 pages including 13 photos. "Les Fokker D.VII austro-hongrois et hongrois" 5 pages including 8 photos and color multi-view drawings of two Red Hungarian D.VIIs [Ed: Illustrated in photo and color drawing is a 2-seat D-VII. Many years ago, I built a 1/72-scale model of this aircraft, but mistakenly as a Fokker C-1. Now, I'll have to repaint the model as a Dutch C-1, and use another D.VII kit to build the Red Hungarian aircraft cor-

rectly with two seats and fuel tanks above the wings.] "Les Tupolev SB en Chine (1ere partie)" 7 pages including 6 photos, a color 3-view drawing, and a color side-view drawing. "Les avions dans les aventures de Tintin" 10 pages on the aircraft that appeared in the long-running adventure series including 21 photos of models finished in authentic color schemes. [Ed: Blue Rider produced 3 decal sets with the markings for Tintin aircraft. One of these sets is still available from the SAFCH Sales Service.] "Actualite Maquettes & Livres" 4 pages with reviews of 20 kits (including a 1/72-scale resin two-seat Fokker D.VII) and 14 books.

#20 Juin/Juillet 2004 (64 pages) "Les Spad 61 en Pologne" 9 pages including 18 photos, a color 4-view drawing, and 17 color side-view drawings. "DAR-1 & DAR-1A" 6 pages including 19 photos, a 1/72-scale 3-view drawings of both the DAR-1 & -1A, and 2 color side-view drawings. "Brewster F2A Buffalo (1ere partie)" 27 pages including 37 photos, a 2-page cutaway drawing, 1/72-scale 3-view drawings of the F2A-1 and F2A-3, one color 2-view drawing (3-F-1), three color 3-view drawings (Belgian NX56B, USN 2-F-16, RAAF J-TD), 8 color side-view drawings [US (6) RNZAF (1), & RAAF (1)]. [Ed: all the drawings show the 'belly window' fitted except for the Belgian aircraft. I would sure like to know which Buffalo types had the belly window and which did not.]. "Les Tupolev SB en Chine" 9 pages including 11 photos, a color 3-view drawing (Japanese puppet Chinese government), and 2 color side-view drawings. "Actualite Maquettes & Livres" 4 pages including reviews of 21 kits (e.g. Amodel's 1/72-scale Romanian Bf 109E-3 and RH's 1/72-scale resin Avia B-534/III and Bk-534), 2 decal sets, and 13 books (e.g. the 3-volume set *Flugzeuge der DDR*).

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 420F for 12 issues).

#135 Juin 2004 (62 pages) "Les Liore & Olivier 25 de la Marine (1ere partie)" 11 pages including 13 photos, 3 color side-view drawings, and a 2-page cutaway drawing. "Retour sur le Messerschmitt 262" 5 pages with 16 photos. "Cahier Special: Les as du débarquement" 19 pages on the aces of the Normandy Invasion (both Allies and German) including 28 photos, a color cover painting, 6 color side-view drawings (P-47, P-51, Spitfire, Bf 109, & Fw 190), and two color 2-view drawings (P-38 & Fw 190). "La chasse terrestre de la Marine Imperiale" 19 pages including 41 photos [1MF, A1N (3), A2N (2), A4N, B3Y, D1A (3), B4Y (2), G3M (2), A5M (6), B5N (2), A5M (5)], and 8 color side-view drawings [A4N1, A5M1 (3), & A6M2 (4)]. [Editor: It's a shame to include color side-views of the much-illustrated Zero when the earlier Japanese a/c have seldom been seen in color.] "Mai 1940: Un etrange Mureaux 115" one page with 3 photos. "Constantin Manolache: As de l'acrobatie" 7 pages including 8 photos, 3 color side-view drawings [IAR 80 (with roundels) & two Bf 109G-6 (one with roundels and the other with Romanian red stars)], and color 3-view drawings of Bu 133 YR-CAS.

#136 Juillet 2004 (62 pages) "L'Arado 196" 13 pages including 26 photos and 5 pages of sketches from instruction manual. "Les Liore & Olivier 25 de la Marine" 22 pages including 33 photos, 4 pages of 1/100-scale multi-view drawings, and 9 color side-view drawings. "Theo Osterkamp: Un as dans deux guerres (II)" 7 pages including 16 photos. "Fuhai no Zero-Sen' (L'invinible chasseur 'Zero') 10 pages including 21 photos and 4 color side-view drawings (Zeros). "Maquette: Le Hurricane Mk II" 4 pages including 9 photos (3 for the

real thing & 6 of 1/72-scale models in 1/72-scale from various manufacturers).

#137 Aout 2004 (62 pages) "Gunther Seeger: Un as trop econnu" 11 pages including 25 photos, 4 color side-view drawings (Bf 109), list of victories, and color cover painting. "Les Fiat G.50 Croates" 9 pages including 17 photos, 3 color side-view drawings, and a 4-view half-tone scale drawing. "L'Arado 196" 11 pages including 21 photos (one French a/c) and 6 color side-view drawings. "La chasse terrestre de la Marine imperiale japonaise (3)" 6 pages including 14 photos and 4 color side-view drawings (Zeros). "Les LeO 25 brasiiliens" 2 pages with 6 photos. "Les avions francais en Tschoslovaquie (6)" 5 pages with 18 photos (Spad VII and XIII). "Oiva 'Oippa' Tuominen et le Fiat G.50" 4 pages including 4 photos of the Finnish ace's G.50 and 6 color photos of 1/48-scale Hasegawa kit finished in his markings.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlef Billig, Oranienstrasse 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#5 (132 pages) [Editor: Another great issue. This has to be one of the top three magazines, along with Air Magazine and Avions, for small-air-force enthusiasts.] "Der zivile Luftverkehr der DDR: Teil 1" 24 pages including 42 photos, numerous maps, and 3 color side-view drawings (An-2, Il-14, & Aero 45). "Karines Oro Pajegos von 1918 bis heute" 26 pages on the history of the Lithuanian AF past and present. The early Lithuanian AF is covered with 18 pages including 53 photos [LVG C.VI (5); Albatros B.IIa, D.III, J.II, C.Ib, & C.XV; Martinsyde Buzzard; Letov S.20 (5); Friedrichshafen G.IIIa (2); Junkers F.13; Fokker D.VII (2); Sopwith Strutter; Ansaldo A.120 (2); SVA-10; Halberstadt Cl.IV; Dobi-1; Anbo-1, -II, -III (2), -IV (4), -VM, -VI (2), -51, & -VIII; Fiat CR.20; Dewoitine D.501 (4); DH.89 Rapide (2); Lockheed Vega (2); Avro 626; and Bu 133 (2)]; 33 color side-view drawings with scrap views of wing insignia [Albatros B.IIa (2) & J.II; LVG C.VI (2); Fokker D.VII (6); Dobi-1, -2, & -3; Sopwith Strutter; Letov S.20L (6); Anbo-1 (2), -II (2), -41, -VIII, & -41; CR.20; Lockheed Vega (3); and Klemm Kl 35]; and five tables ["Individual a/c 1919-23"; "Specification of Dobi a/c"; "Specifications of Anbo a/c"; "Order of Battle 15 June 1950"; and "Aircraft on Hand 15 June 1940"]. The story of the modern Lithuanian AF is covered in 8 pages including 35 color photos [An-2(6) & -26 (3); L-39 (5); Mi-8 (7) & -2 (4); Piper PA-38; Yak-52 (2), -55, & -18T; L-410; PZL-104; and Ka-26 (2)]; nine color side-view drawings [Mi-8 (3), L-39, An-2 (3), L-410, & L-13 Blanik]; four color drawings of SKAT logo; "Order of Battle 1998-99"; and list of aircraft from 1993. "Eurofighter Typhoon: Die komplette Story" 44 pages including numerous photos and a 2-page 3-view color drawings. "Kampfjets uber Nigeria" 8 pages including 11 photos [MiG-17 (5) & -15UTI; Il-28; and L-29]; four color side-view drawings [MiG-17 (3) & -21]; one map; and lists of individual a/c 1960-89 and 1960-89. "Chinesische Luftwaffen zwischen 1914 und 1945" 24 pages including 29 photos, 33 color 3-view drawings and side-view drawing with scrap view of wing insignia [Avro 504K, Polikarpov R-1, Curtiss Hawk II, Junkers K 47, Vought O2U-1D Corsair, Ryan B-1 Brougham, Armstrong Whitworth AW XVI (2), Fiat CR.32, Waco 240A, Armstrong Whitworth Atlas II, Avro Avian IVM, Avro 637, Nakajima Type 91, Nakajima Ki-34, Tupolev SB-2bis, Nakajima Ki-43 Oscar (2), Kawasaki Ki-32 Mary, Nakajima Ki-27 Nate (3), Tachikawa Ki-9 Spruce (2), Fokker Super

Universal, Clark GA-43, Breguet 19, DH.60 Moth, Bf 108, Ju 86Z, and C-47]; color drawings of the insignia of all the different air forces; one map; and tables listing the a/c used by: "Chinese Republic 1914-1923"; "Kanton 1833-1936"; "Nanjing 1925-1938"; "Guangxi 1924-1937"; "Mandscherei 1931"; "Mandschukuo 1932-45"; "National Aviation Corporation"; "Marineluftwaffe 1927-1938"; and ar-lords "Liu Wen-lo 1930-1932", "Tsai Ting-kai 1933", "Yen His-shan 1921-1940", "Lung Yun 1926-1933", "Chen Jitong 1936", and "Tuchun 1926-27"]". [Editor: The color drawings in the Lithuanian and Chinese articles reminded me of those published in the late, lamented Insignia Magazine. Then I saw that Richard Humberstone, the Editor of Insignia, assisted in preparing these articles. Presumably these drawings were originally prepared for Insignia.]

MITTEILUNGEN (IPMS Germany, Bergengruenstrasse 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

2/2004 (40 pages) Nothing of small-air-force interest.

ITALY

AERO FAN Storia di Italiane. Italian-English text. (Giorgio Apostolo Editore, Via Ampere 49, 20131 Milano, Italy.) 4 issues L 80,000.

#88 Gen.Mar. 2004 (68 pages) "Bleriot Monoplanes at Brescia in 1909" 8 pages including 7 photos and a unique 2-page contemporary color drawing of the Bleriot. "The Forgotten Fighters of Antonio Chiodi" 12 pages including 31 photos, a color scale 4-view drawings of the very colorful Caproni CH.1, and a small 3-view drawings of the CH.2 (a fascinating twin-boom, push-pull fighter project with humongous fire power). "A Pilot of 150° Gruppo" 4 pages including 6 photos (Macchi C.200). "Aeronautica Nazionale Repubblicana Units Based on Italy's Eastern Borders in 1944-43" 10 pages including 17 photos (Macchi C.205 & Me 109). "Baltimores in Action" a 9-page narrative of a combat sortie to Sarajevo including 11 photos. "L'Album di Aerofan" 2 pages with 4 photos of Cant S.506B of the Governor of the Dodecanese Islands in Rhodes harbor.

#89 Apr.Gui. 2004 (68 pages) "CR 42 in Northern Skies" 17 pages on the CR 42 in Sweden including 28 photos (8 in color), a table listing the history of individual a/c, a scale 4-view drawing, and 7 color side-view drawings. "From Lictor to OSA 135" 7 pages on the last aircraft built by Gabardini: The Lictor 90 (6 photos) and 130 (4 photos) and the OSA 135 (3 photos). "Jet Powered Ectoplasm" 7 pages on the little-known designs (unbuilt) of Ing. Lelio Rossi including the R.105 jet-propelled fighter of 1943 which is illustrated with 4 pages of original drawings. "A Pilot of SAS" 11-page story of the life of an Italian transport pilot during WWII including 19 photos of the a/c he flew in training and in service in North Africa. "4 May 1949 Superga's Tragedy" 5 pages and 6 photos about the 4 May 1949 crash of Fiat G.212 'I-ELCI' in which the entire Torino Football team was killed.

JP-4 Mensile di Aeronautica (JP-4, Via XX Settembre 60, 50129 Firenze; L 27.000 Europe, L 30.000 elsewhere).

#5 Maggio 2004 (100 pages) Color photos: Yemeni Mi-8 and Su-22. "Gli Apache olandesi in Afghanistan" one page with 4 photos of Dutch helicopters with the ISAF. "FIDAE 2004" 6 pages including 11 photos (Chilean & Peruvian C-130; Argentine Super King Air 200, & Chilean Boeing

707). "Il militare di Embraer" 5 pages including 10 photos (Super Tucano, F-SBR, BAF 145RS, & Greek 145 AEWIC). "Dog Fish 2004" 2 pages including 10 photos (Canadian, Norwegian, & Portuguese P-3 Orions and Spanish CN-232S).

#6 Giugno 2004 (100 Pages) Color photos: Irish PC-9M '260', Peruvian Mirage 5DP, and Canadian CC-115. "Il 6° ROA I Iraq" 2 pages including 4 photo of Italian HH-3F. "Il ritorno del Chipmunk" 3 pages including 6 photos of Chipmunks returned to service with the Portuguese AF.

#7 Luglio 2004 (100 pages) Color photos: Ukrainian Su-25, Iraqi F-7 Airguard, and RAAF AEW Wedgetail. "A-104 Addio!" 3 pages including 9 photos. "Spring Flag 2004" 4 pages including 9 photos (Italian Eurofighter, Tornado, AMX, Starfighter, & F-16; French Mirage; and Luftwaffe Tornado).

#8 Agosto 2004 (100 pages) Color photos: Austrian F-5 'J-3033' and Iraqi/Jordanian/Australian (?) Seabird 'VH-ZIG'. "7° Reggimento 'Vega'" 6 pages including 16 photos (Italian Augusta A129). "Sorem: La stagione 2004" 4 pages including 11 photos (Italian CL-415). "Incidenti" [Ed: This always interesting section on military and civilian aircraft crashes is now made ever better by the inclusion of color photos of the actual aircraft lost.] 2 pages including 7 photos (Guatemalan BT-64 'FAG-580', Spanish Mirage F.1M 'C.14-71 / 14-43', Canadian CT-155 Hawk '155202', Irish Cessna FR172K '243', Russian Tu-22M, Hispano MA-200 Saeta 'N611HA' (in Spanish AF colors), and Russian Li-2 'RA-1300K'.

NETHERLANDS

MODELBOUW IN PLASTIC (IPMS-Nederland, c/o Rene Euhart, Bernadottestraat 133, NL-2131 SP Hoofddorp; erhart@quicknet.nl).

2/2004 (34 pages) "Lockheed T-33A" 10 pages on Dutch T-33 including 9 photos and 3 pages of multi-view drawings. "Super Corsair - De Goodyear F2G-2 van Lone Star Models" 4 pages including 7 photos of the model in various stages of construction. "Vliegtuimusea Down Under" 2 pages with 6 photos of vintage a/c in New Zealand. "Mysterie IVA in dienst van de Israelisch Luchtmacht" 3 pages including 8 photos of the completed 1/72-scale model. "Je eigen decal s entwerpen en printen" 6 pages on making your own decals.

SPAIN

REVISTA ESPANOLA DE HISTORIA MILITAR (Carlos Fresno Crespo, Alcaniz Fresno's S.A., C/Cromo 18-20, Poligono Industrial San Cristobal, 47012 Valladolid) 800 Pts.

#45 (92 pages) "En el centenario de 'Cucufate'" 3 pages including 5 photos and a color side-view drawing (Breguet 14). "Las fichas del Servicio de Recuperacion. El material antiaereo (2ª parte)" 6 pages on anti-aircraft guns including 10 photos and 2 color side-view drawings. "Los aviones del Aero Club de Baleares durante la Guerra Civil" 8 pages including 10 photos and 3 color side-view drawings [DH-60X Moth (2), Avro Avian, & Stinson SR Reliant]. "Otro invitado de Espana" 5 pages including one photo and one color side-view drawing (Luftwaffe Ju 88). "El camuflaje de los vehiculos acorazados alemanes (1939-1945)" 12 pages including 12 color side-view drawings of German creepy-crawlers. "Los Breguet XIX Republicanos en el Norte (1ª Parte)" 6 pages including one photo, a map, & a color side-view drawing.

Book insert (pages 161-178): **Los Medios Blindados de Ruedas en Espana**. "Un siglo de Historia - La industria espanola y las ultimas incor-

poraciones (1976-2004)" 7 pages including 10 photos and 2 color side-view drawings. "Blindados de otros ejercito y cuerpos" 9 pages including 12 photos and 3 color side-view drawings.

Poster inserts: "Blindado Medio de Ruedas (BMR) 3560/55 'Recovery'"; "Pieza de Artilleria Autopropulsada M-110 A-2"; and "Blindado medio de Ruedas (BMR) Puesto de Socorro".

#47 (96 pages) "Hidroaviones Dornier en la provincia de La Coruna" 8 pages including 14 photos of German Wal & Do 24. "Los Breguet XIX Republicanos en el Norte (3ª Parte. Las operaciones aereas en 1937)" 14 pages including 8 photos, 2 maps, and one color side-view drawing. "Aquellos submarinos de 1914" 8 pages including 12 photos.

Book insert: **Carros de Combate**: y vehiculos de cadenzas del Ejercito Espanol. Un siglo de Historia (pages 1-16) "Los Primeros Anos (1912-1936)" one page including one photo. "Schneider CA-1" 7 pages including 14 photos and 2 color side-view drawings.

Poster inserts: "Camion oruga blindada M-16 (antiaereo)"; "Blindada n° 1 de maquinista Terrestre y Maritima (M.T.M.1)"; "Carro de combate ligero M-24 'Chaffe'"; "Vehiculo de alta movilidad tactico (vamtac) 'rebrco' vehiculo de transmisiones".

#48 (96 pages) The entire issue is devoted to the Invasion of Normandy. Color side-view drawings of aircraft are: P-51 Mustang (2), Beaufort, B-25 Mitchel, B-26 Marauder, A-20 Boston, Mosquito, Stinson L-5, C-47 Dakota (3), Waco CG-4A, Hamilcar, Spitfire, B-24 Liberator, B-17 Flying Fortress, and Fw 190 (2). Color side-view drawings of creepy crawlers are: Panther (2), Tiger (2), Wespe (2), Greyhound, Sherman (5), Universal Carrier, and Sd Kfz 251 (3). [Ed: I left out a few creepy crawlers whom I couldn't identify from the Spanish captions.]

Book insert: **Carros de Combate**: y vehiculos de cadenzas del Ejercito Espanol. Un siglo de Historia (pages 17-32) "Los Primeros Anos (1912-1936)" Entirely on the Renault FT-17 including 37 photos, 3 color side-view drawings, and a 2-page color 4-view drawing.

Poster inserts: "Vehiculo de Combate de Infanteria/Caballeria (VCI/C) 'Pizarro'"; "Transporte Oruga Acorazado (TOA) Siembraminas"; "Carro Blindado 'Bilbao' Mod. 1932"; and "Furgoneta Blindada en la Sublevacion de Asturias (N° 1)".

#49/50 (88 pages) "El primer radar espanol de alerta y control" 9 pages including 10 photos and 4 drawings (with dimensions). "La pesca del Swordfish" 9 pages including 9 photos and color side-view drawings of the interned Swordfish 'P4073' in RAF and in Spanish markings. "Mision sin retorno" 10 pages on Doolittle's Tokyo raid including 10 photos, a map, 3 color side-view drawings, and a color painting of a B-25 over Japan. [Ed: If you've always wanted to do a diorama commemorating this pivotal event but were reluctant to try representing the famous photo of a B-25 taking off from the Hornet, there's a photo (new to me) in this article of a B-25 and F4F 'F-26' tied down on the deck of the Hornet. Seems like a project doable by the average modeler.] "Los cinco dias de Holanda: 1940" 19 pages on the German invasion of Holland including 20 photos (all from German sources), 5 maps, and 2 color side-view drawings [Fokker D-21 (the only a/c illustrated) and Landswerk M-36 armored vehicle].

Book insert: **Carros de Combate** (pages 33-48). "Los primeros anos (1912-1936)" "FT-17" continued, 10 photos and color side-view drawing. "Chenillette M-21" 3 pages including 3 photos and 2 color side-view drawings of this unique vehicle

that could travel on either wheels or tracks. "Fiat 3000 Mod.21" 2 pages including one photo and one color side-view drawing. "Trubia Mod.1925" 2 pages including one photo. "Trubia Mod. A.4" 6 pages including 8 photos and one color side-view drawing.

Poster inserts: "Transporte oruga acorazado TOA-LAG 40"; "Transporte oruga acorazado TOA-TOW"; "Transporte oruga acorazado TOA-Recuperacion (Recovery)"; and "Transporte oruga acorazado TOA-Zapadores (VCZ)".

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$35.00 USA or \$40.00 overseas).

#185 August 2004 (146 pages) "The Wrights in Europe" 11 pages including 8 photos. "Bell Tetrahedral Kites" 11 pages in the history of Alexander Graham Bell's experiments and detailed instructions on building and flying your own tetrahedral kit (3 photos and many sketches.) "The Gallaudet Story: Part 8a - The D-1 Hydroplane for the US Navy" 18 pages including 8 photos and 2 pages of scale drawings by Paul Matt. "Pilot Reports: The Bristol Boxkite = First Impressions" 8 pages including 7 photos. "Engines" 15 pages including 18 photos and numerous scale drawings and sketches. "Aircraft" 5 pages including 13 photos. "Drawings" 11 pages. "Properties of Airplane Fabric" 4 pages. "Museums & Organizations" 4 pages with 16 photos (8 from the Swedish Air Force Museum). "Models" 14 pages with 39 photos. "The Aviator" 3 pages including 5 photos of D, VII's and Se.5s assembled for the new movie on Howard Hughes. "Letters" 7 pages. "Publications" 8 pages. "The Blue Max Revisited" 9 pages including 8 photos of a/c used in the film.

[Ed: The following editorial by the editor of WWI Aero deserves repetition.] "As we've noted in the past, we print reviews of some 40 publications in each issue, a good many of which are magazines and professional journals from different countries. For years we've tried to get other journals and avmags to do this in a reciprocal kind of way, with very little success for the most part. We'd be interested in what you, our membership, feel about this - are these reviews helpful? If so, would you like to encourage editors of other magazines to which you subscribe to do some mutual outreach, not only to us but to each other?"

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$35.00 USA or \$40.00 overseas.).

#71 July 2004 (84 pages) "Autogiro Rooftop Air Mail Operations and Flight Testing" 7 pages including 4 photos. "Ford Flies Mrs. Lindbergh to Mexico City" 7 pages including 6 photos. "Korvin-Kroukovsky: EDO Aircraft's Legendary Chief Engineer" 10 pages including 15 photos, "Aviation Movie Publicity Stills" 3 pages with 6 photos. (Who would you rather look at, Vera Ellen or a Stearman?) "ID UNK" 8 pages including a 3-view scale drawing of the Simplex 'Red Arrow' 7 photos and 2 pages of scale drawings of Hawke Crop Duster, and 5 photos. "Control Wing Planes of Dr. George A. Spratt (1870-1934) & Son, George G. Spratt (1904-1998) from 1907 to 1994" 4 pages including 39 small photos. "Cockpits: Northrop XFT-1 & -2 Fighters" 6 pages with 10 photos. "Details: Northrop AFT-1 & -2 Fighters" 6 pages with 17 photos. "The Curtis-Wright Technical Institute Bunting" 4 pages including 4 photos and a scale 4-view drawing. "Stearman 4-D NC-769H" 3 pages including 3 photos. "Models" 2 pages including 6 photos. "Skyways Reviews" 3 pages.

Meidagen 1940:

The Dutch Air Arms Defense against the German Invasion, May, 1940

Part 2a

Chapter 3

Meidagen Begins: Friday, May 10th

The swine has gone off to the West Front ...
Let's hope that we'll meet again after the war

Oberst (Col) Hans Oster, *Abwehr* Officer
to Majoor (Maj) J. G. Sas, Dutch Military
Attache' to Germany, 2130 hours, 9 May 1940

Battling the German Bombing Attacks

At three o'clock in the morning, while *Luftwaffe* bomber crews were taking off from their bases in northern Germany, alerted by their well-informed military attaché in Berlin the men of the *Veldleger* and *ML* went on increased alert. At 0350 two G.1's of 3.JaVA took to the air from their Waalhaven airfield near Rotterdam. They would be the only Dutch fighters airborne the moment the initial onslaught began.

At the frontier, Dutch border guards, nonchalantly at first, watched squadron after squadron of Junkers tri-motored transports rumble overhead. From the hills and forests to the east came the clanking, squeaking, and raucous engine noise of military machinery. Alerted and wary, the Dutch guards blew up the vitally important bridges spanning the Maas River at Maastricht, Roermond, and Nijmegen. But at Gennep, between Roermond and Nijmegen, Nazi commandos succeeded in capturing the bridge just in time for a *panzerzug* ("armored train") and a freight train loaded with infantrymen to go steaming across. The trains disgorged several battalions of troops which were soon attacking the Dutch fortifications along the "Peel Line" from the rear, opening the way for the 9th Pz Div.

Meanwhile the 75 Heinkel He.111's of *Kampfgeschwader 4* ("Battle Wing 4", abbreviated KG.4), having taken off their fields near Bremen and flown well out into the North Sea towards Great Britain, turned southeast and came bearing down on their Dutch airfield targets as if they were British planes just crossing the English Channel. This, the Germans hoped, would fool the sleepy Dutch.

Rewrite of 3.JaVA's Combat Over Waalhaven, 10 May 1940

SOURCE: Frits Gerdessen's letter to the author, 24 August 2004

While the Dutch were not to be completely fooled or found completely asleep, they were soon overwhelmed by the suddenness, volume, and ferocity of the *Luftwaffe* onslaught. The pair of powerful G.1s intercepted the leading formation of 28 bombers from II *Gruppe/Kampfgeschwader 4* (II/KG.4). *Eerste luitenant* (1Lt) P. Noomen (in #312) brought down two of the twin-engine attackers (from 5/KG.4) and damaged a third, shooting out the defensive gunner, as they approached their target, Waalhaven airfield.

His wingman, *tweede luitenant* (2Lt) Gerben Sonderman (flying #311) initially missed the German bombers, and instead engaged the Junkers Ju 52/3m transports (claiming

one destroyed) and their Messerschmitt Bf 109E escorts coming in from the east. One of his victims was actually a Do 17Z belonging to the 7th FI Div's HQ reconnaissance squadron (*Aufklärungs Staffel/7.FI.Div.*), shot down over South Rotterdam while checking on the progress of the airborne assault. Low on ammunition, he joined two other G.1's that had managed to get airborne in the midst of the bombing attack and then spotted a lone He 111 milling about the area. This proved to be the aircraft of the KG.4 commander, Oberst (Col) Martin Fiebig, who was observing the effects of his unit's attacks. This was the aircraft (5J + DA of *Stab/KG.5*) which 1Lt Noomen had already damaged. With the rear gunner dead, the Heinkel was defenseless and Lt Sonderman quickly shot it down, resulting in the capture of Col Fiebig who bailed out of his stricken bomber.

At Waalhaven, however, sticks of bombs rained down upon the airfield, slamming into runways, aprons, building, and hangars. Damage was severe and, tragically, many of the Dutch defenders, allowed to continue sleeping on their cots in the spacious hangars in spite of the increased alert, were wiped out when these structures exploded, collapsed, and burst into flames. For the *ML* and for Holland, the war had finally begun.

1Lt K. W. Woudenberg (#329) followed Sonderman into the air and also engaged incoming Ju 52/3m's, claiming one shot down, as well as a Ju 87 Stuka. (See Note 1) He was engaged by Messerschmitt Bf 110C *Zerstörer* twin-engine escort fighters, but escaped.

Woudenberg was soon joined by *sergeant* (Sgt) H.F. Souffr e (#328) who had taken off with some difficulties. Sgt Souffr e attacked another wave of Heinkels, shooting down one (5J + KN from 5/KG.4) which crash-landed. He was then engaged by the escorting Bf 109E's, but also managed to escape. Joining Lt Woudenberg, he received a hand signal that his landing gear was down. Lt Woudenberg pulled away, initially intending to land at Soesterberg, and Sgt Souffr e eventually joined up with Lt Sonderberg.

Meanwhile, back at Waalhaven, a fifth G.1 (#309) scrambled into the air at 0400 hours, just after the first wave roared by. In it, 1Lt J.P. Kuipers quickly scored two more "kills" (He 111's) but the left engine of his Fokker was shot out by their defensive fire. He landed back at Waalhaven almost immediately. He was joined on the airfield by Lt Noomen, whose G.1 developed a leaking (damaged?) fuel tank. Both of these aircraft were lost on the field.

In the initial attack on Waalhaven, II/KG.4 lost five of its 28 attacking Heinkels (all attributed to *flak* by German sources), but the damage to the airfield was severe. The Koolhoven aircraft factory located there was destroyed and with it three finished FK.52 general purpose biplanes (in crates), one of two FK.58 fighter prototypes, and the complete FK.56 (a reconnaissance-training monoplane recently ordered by the *ML*) and FK.58 production lines. Elsewhere

on the airfield three G.1's (#309, #334, and #335), a Fokker C.10 (#716), the twin-engine Fokker F.8a photographic plane (#951) and an FW.58A-2 Weihe trainer (#195) were totally destroyed.

A sixth G.1 (#315) was slightly damaged in the attack and took off for the D.21 base at De Kooy for repairs. Another G.1 (#319) got airborne without its rear gunner; Sgt S. de Vos had been killed by strafing attacks as he ran to his aircraft. Without the rear gunner, 2Lt J. van der Jagt was easily overwhelmed by some of the swarms of Bf 109E's (probably from 11(N)/JG.26) and he was shot down; his blazing aircraft fell into the Maas River, taking him to his death.

As the *Luftwaffe's* second wave (Ju 88As from I/KG.30 intent on bombing Dutch AA batteries in preparation for the airborne assault) approached, a sixth G.1 (#330) got into the air, taking off over the burning Koolhoven factory. Piloted by *sergeant-majoor* (SM) Jan J. Buwalda, this aircraft was caught in the mass of German planes roaring and rumbling over Rotterdam and in 25 minutes, SM Buwalda destroyed an He 111 bomber (of 2/KG.4) and a Do 215 reconnaissance aircraft (from 2(F)/ObdL) before running afoul of a *jagdstaffel* of a dozen Bf 109E's (3/JG.51).

As SM Buwalda was being shot down by *Oberleutnant* (1Lt) Richard Leppla and crash-landed near Zevenbergen with both engines shot up and his rear gunner injured, the three G.1's still airborne searched for a place to land. Unable to return to Waalhaven because of the follow-up airborne assault, Lt Sonderman made an emergency landing on the beach near Oostvoorne, south of The Hague. His airplane was seen there by Sgt Souffr e, who landed nearby. The two Fokkers were then spied by Lt Woudenberg, who also landed there. Out of fuel and ammunition, the three G.1's would sit out the rest of the battle waiting on the arrival of fuel, ammunition, ground crews, and a proper starting crank.

By the end of the day, the 3.JaVA, having transferred its sole remaining G.1 (#315) to 4.JaVA and having had its air base completely destroyed by air attacks, airborne assaults, and ground fighting, was effectively stricken from the *ML's* order of battle.

At Bergen, 4.JaVA (co-located with the *StratVerVA's* C.10s) had begun the day badly. Because the moist, soft condition of the airfield, the unit's 12 serviceable G.1's were not dispersed, but instead were parked wingtip to wingtip (in three rows of four) on the concrete apron between the two hangars. When, at 0359, the *Luftwaffe* bombers (He.111's from I/KG.4) and Bf.110 strafers came roaring in, one G.1 was destroyed outright (#333) and ten others were damaged. The destruction of the hangars resulted in the loss of the two G.1's (#313 and #317), three C.10s (#704, #707, and #710), and a C.5 target tug (#654) undergoing repair and maintenance.

The one surviving 4.JaVA G.1 (#321) immediately took to the air at the hands of 1Lt J.W. Thijssen. He started chasing the retiring German bombers but was driven off by his own countrymen's ground fire. After strafing three Ju.52/3m transports that had landed on the beach near The Hague he returned finally to Bergen and landed. By the end of the day, his was one of only three combat worthy G.1's in the Dutch air arm. The other two were #315, flown in from Waalhaven via De Kooy, and #303 which, being ready at the Fokker factory, was flown to Bergen via Buiksloot auxiliary field.

Upon hearing of the *Luftwaffe* attacks at Waalhaven and other *ML* bases, the 1.JaVA at De Kooy launched all eleven of its D.21's at 0359 hours, forming up into three three-plane formations (called "patrols") and an additional pair. Because not all D.21's were equipped with air-to-air radios, some of the wingmen flew without them, relying on hand signals from their leaders to provide direction. These three-ship patrols swept south, but, as a group, failed to find any of the large German formations. Back at De Kooy, as soon as the patrols had departed, the airfield came under attack by a pair of strafing Bf.109E's. They destroyed the base's mobile radio command post but not before the squadron commander, *kapitein* (Capt) Hein M. Schmidt Crans, could issue a recall order.

With this, the penalty for the lack of radios in the D.21's soon became evident. One of the patrol leaders, 2Lt Herman Doppenberg (#221), received the recall order, passed it to his two wingmen via hand signals, and turned back to the north. One of his wingmen, *wachtmeester* (Flight Sergeant or Flt Sgt) Jacques van Zuijlen (in #223), failed to see the signal or for some other reason departed from the rest of his formation. He subsequently came upon a formation of He.111's and engaged them only to be shot down and killed by their defensive fire.

A second D.21, flown by Flt Sgt W. Hateboer (#244), also became separated and wound up chasing down a Ju.88A (from 9/KG.4) and damaging it so severely it force-landed on the beach at Noordwijkerhout. (This aircraft was later repaired and recovered by the Germans.) Afterwards, he landed at Schiphol to refuel and rearm, returning to De Kooy a short time later.

The remaining nine Fokkers returned to De Kooy and, while the three-ship patrol led by 1Lt F.L.M. Focquin de Grave (#218) circled warily overhead, the other six went in to land and refuel. Within fifteen minutes these two patrols were airborne once more and Lt Focquin de Grave's patrol came gliding in for a landing. Just as they touched down nine Messerschmitts (from II *Gruppe* (*Jagd*)/*Tr gergruppe* 186) came roaring in, strafing. One D.21 (#241), flown by 2Lt Jan Bosch, burst into flames, but Lt Focquin de Grave and his remaining wingman, 2Lt Henk J. van Overvest (#219), quickly took to the air again as the six on CAP came swooping down upon the Bf.109E's. The fast Messerschmitts were not prepared for the tight turning radius of the nimble Fokkers and Van Overvest was soon able to latch onto the tail of the German leader, shooting him down. The Daimler-Benz engine dead, 1Lt Dieter Robitzsch (commander of 5(J)/TrGr.186) made a wheels-up crash landing into the middle of De Kooy airfield, where he was immediately taken prisoner.

Lt Focquin de Grave also latched onto a Messerschmitt and the whole swarm of fighters began a swirling, left turning fight at low altitude (1,200 ft/365m) right over the airfield. 2Lt Bram "Bob" van der Stok's section dived into the melee and he (in #234) damaged one German, the Bf.109E issuing white smoke from the engine. Lt Doppenberg's (#221) two-plane section also joined in and quickly claimed one Messerschmitt shot down. This was probably *Unteroffizier* (Corporal) Wilhelm Rudolf (5(J)/TrGr.186). His Bf.109E was badly damaged and he was wounded in the back, crash-landing in a polder field near Westerland, approximate-

ly 5 miles (8.5 km) away. Mortally wounded, *Uffz* Rudolf died in Alkmaar's Central Hospital four days later.

Lt Focquin de Grave's target was damaged and had to make an emergency landing at Borkum during its return. Lt Van der Stok claimed a "kill" on another German, this one making the mistake of attacking the nimble Fokker and staying for three complete turns until Van der Stok had swung all the way around onto his tail. The German pilot compounded his mistake by reversing his turn, momentarily placing himself in Van der Stok's sights, and after a burst of fire went diving away streaming steam and oil smoke. This may have been *Gefreiter* (Private) W. Raose (4(J)/TrGr.186). Raose's Bf.109E was badly hit and during the return flight, he successfully force-landed near Leeuwarden. He was quickly captured and was soon turned over to the British to sit out the war in a prisoner of war camp in Canada.

When the swirling ten-minute dogfight was over, three of the much-vaunted Messerschmitt fighters, one third of the attacking force, had been shot down by the obviously dominating pilots of 1.JaVA. The dauntless Dutch fighter pilots had given their *Luftwaffe* counterparts a rude shock and a hard lesson over De Kooy airfield.

However, all eight of the D.21's were damaged to one extent or another. Only three of them (and the D.21 that had rearmed at Schiphol) could be made ready to launch again soon. In the meantime, the field was attacked twice again, at 0800 hours when two of the damaged D.21's (#214 and #233) were riddled even more, being damaged beyond repair, and at 1200 hours Lt Van der Stok's aircraft (#234) was destroyed and all of the base's buildings were burned out or badly damaged. One of the previously damaged D.21's (#214), as well as a Fokker C.9 (#665), was lost in one of the destroyed hangars.

Because De Kooy, Schiphol, and Ypenburg were bases that were obviously known to the Germans, the Dutch High Command decided to concentrate all surviving D.21's at the auxiliary airfield of Buiksloot. That afternoon the 1.JaVA sent two of its six reparable fighters to Buiksloot, the others following the next two mornings.

At Schiphol airfield, 2.JaVA got all of its nine fighters airborne just as two squadrons of Heinkel bombers (from III/KG.4) were roaring in from the southeast at 0350 hours. The incoming raid arrived so quickly - dropping their bombs on the hangars along the southern edge of the airfield - that the squadron had no time to form up into its three-plane "patrols" and the D.21 pilots entered the fray individually.

In spite of the fact that they were surprised and found themselves immediately involved in a swirling, roaring air battle, the pilots of 2.JaVA reacted well, firing at the He.111's flashing by and rolling in on the squadron of Ju.88A's (9/KG.4, the only squadron of that wing to have converted to the newer, faster, and superior Junkers "*schnellbomber*") that followed. Sgt B. de Geus (#236) shot up one He.111 and then shot out the nose gunner of a Ju.88. 1Lt N.W. Sluijter (#229) rolled in behind a Ju.88A and poured machine gun fire into it, shooting it down over Schiphol airfield.

As at De Kooy, eight of the D.21's survived their first encounter with the *Luftwaffe*, and in this case either landed at Schiphol, which had been devastated, or at the auxiliary field at Ruigenhoek. The ninth Fokker (#245) was force-landed near Zwaagdijk by Sgt H.B. Bulten, who had been

wounded in the turbulent combat with the attacking bombers. He was pulled from his damaged machine by local citizens who treated his wounds and injuries and hid him from the invaders. The aircraft was guarded, but the *Jachtgroep* was not informed of its location, so no effort was made to recover the machine. Five days later it was found by the Germans and later hauled to Munich and put on display as "war booty".

At Ruigenhoek auxiliary field, five of the surviving D.21's were rearmed and, led by Lt Sluijter, took off at 0730 hours to intercept the incoming German transports that now seemed to be swarming across Holland like clouds of large, noisy locust. After passing by Schiphol, they spotted one Ju.52/3m (KGr zbV.9) flying past Gouda, headed east. This transport was attempting to return to its base in Germany after delivering its load of air-land infantry to Ockenburg airfield near The Hague. Lt Sluijter dove in to attack, with his entire formation following. For his efforts, his D.21 was hit, and he was wounded by the Junkers' rear gunner, but Sgt de Geus set one engine on fire and the other three wingmen completed the job, 2Lt J.C. "Hans" Plesman (#235) sharing credit with De Geus for its destruction. The crippled transport crash-landed at Stolwijk, southeast of Gouda, where its crew of nine was captured.

Following this action, one of the formation, Sgt F.C.H. Looijen (#225), became separated and apparently was spotted and attacked by the roving German Messerschmitts. His aircraft was shot down by 1Lt Johannes Seifert (of 3/JG.26), crashing at Ouderkerk on the Hollandsche IJssel.

Of the remaining four Fokkers, one pair landed at Schiphol and the other two returned to Ruigenhoek. After rearming and flying a strafing mission against the Ju.52/3m's landing on the beaches at Katwijk, they too landed once again at Schiphol, where 2.JaVA now had six of its seven remaining D.21's ready for combat that afternoon.

As the doughty D.21's of 2.JaVA were breaking ground at Schiphol at 0350 hours, the nine operational T.5's of the *BomVA* were taxiing out for take-off. At that very moment the first pair of He.111's roared in and bombed the hangars along the southern edge of the airfield. One T.5 was damaged by the bomb blast splinters (#859) and had to abort its takeoff because its hydraulic system was crippled this aircraft would have to be written off. However, the other eight T.5's roared into the air and quickly found themselves in the midst of a full-fledged air attack.

Each T.5 was commanded by the bombardier-observer who also manned the 20-mm Solothurn nose cannon. Directed by their aircraft commanders, the pilots of the T.5's carved into the swarming formations of *Luftwaffe* bombers while the commanders pumped 20-mm cannon rounds into the Heinkels off the nose. In the rear, the co-pilots, radio operators and mechanics manning the 7.9-mm top, waist and tail machine guns blazed away at the German planes all around them. In this way, 2Lt Bernardus Swagerman, his aircraft (#855) piloted by 2Lt N. Steenbeek, shot down one He.111 (III/KG.4) which crashed near Noordwijk. 2Lt P.H. Wildschut (in #850, flown by 2Lt J. C. Pool) intercepted a whole *staffel* of nine bombers and downed one of them. Two other T.5 commanders also claimed "kills" in the wild fight as the German attackers fled the target area. (See Note 2.) Ironically, the T.5's first combat was conducted as the design

had originally been envisioned, as a *luchtkruiser* in the bomber-destroyer role!

Miraculously, the eight Dutch bombers survived the chaotically confused engagement but found themselves scattered across five different airfields, two of them being badly damaged in emergency landings (#865) or by German Dutch AA guns (#858), and later destroyed in subsequent German air attacks.

Schiphol airfield itself was devastated: hangars and shop buildings blasted and burning, runways and ramp area cratered, wrecked and blazing aircraft littering the whole base. One T.5 bomber (#851) was destroyed in a maintenance hangar and two others (#860 and #863) still lacking armament were badly damaged. Also, the prototype Fokker D.XXIII twin-engine (push-pull) fighter was damaged and one of the *ML*'s FK.43 (#966) light liaison aircraft and an FW.58B-2 (#199) under-going repair were also lost in the bombing. Additionally, the Dutch national airline, KLM, lost five Douglas DC-2 airliners in the bombing.

Defending Against the Airborne Assaults

Only minutes behind the waves of German bombers came the huge formations of Junkers Ju.52/3m tri-motors of *KGzBV.1* fanning out to deliver small units of the *Luftwaffe*'s elite 7th *FI* Div to strategic targets. These slow, ungainly transports disgorged "sticks" of paratroopers into the air and they descended upon the villages of Dordrecht (I Battalion/*FJR.1*) and Moerdijk (II/*FJR.1*), quickly securing the bridges over the wide Waal and Maas Rivers and digging in on both banks to await the arrival of the 9th *Pz* Div.

In Rotterdam itself, an even more audacious tactic was used with 120 men of a company of Infantry Regiment 16 (abbreviated IR.16, a component of the 22nd *LL* Div), being flown into the heart of the city in twelve elderly He.59 twin-engine float biplanes! They landed on the surface of the Nieuwe Maas River, taxied up to the bases of the Wilhelm Bridge spanning it and quickly scampered up onto the structure. Immediately they disconnected the demolition charges and set up defensive positions in the heart of the city to hold it. Fifty paratroopers that had been dropped into the South Rotterdam sports stadium quickly arrived in a motley convoy of commandeered automobiles led by a confiscated street-car!

But the major airborne assault on Waalhaven airfield ran into stiff resistance by the Dutch defenders. Once the paratroopers (III/*FJR.1* jumping from aircraft of III/*KG zbV.1*) were on the ground, the second wave of Ju.52/3m s (*KG zbV.2*) began landing with reinforcements (the rest of IR.16). However, Dutch reinforcements also arrived quickly and a fierce pitched battle began for the control of the airfield. Throughout the day the German paratroopers and infantrymen clung desperately to their tenuous positions and, radioing for help, were soon supported by the *Stukas* of *Luftflotte 2*.

Even more disastrous for the Germans was the air assault on the three airfields around The Hague on Valkenburg (north), Ypenburg (east), and Ockenburg (south). After the *Luftwaffe* bombers (I/*KG.4*, I/*KG.26*, or I/*KG.30*) pounded the landing zones, paratroopers (I/*FJR.2* dropped by I/*KG zbV.1*) descended to secure each airfield's perimeter. Finally, the Ju.52/3m tri-motor transports of *KG zbV.2* arrived to land

the more heavily armed assault troops of the Army's 22nd *LL* Div. But the Dutch resistance and counter-attacks were far more than the Germans expected.

The only one of the three target airfields that was being used as an active *ML* base was Ypenburg, where the 2.*LvR* had stationed its squadrons of D.21 fighters and DB-8A attack bombers. These aircraft had all been armed, fueled, and warmed up from 0330 hours, but at daybreak they were shut down and the crews climbed out. Suddenly, at 0350 with the approach of three unknown aircraft, the base commander, Capt H.L.G. Lambert (C.O. of II-2.*LvR*) sounded the air-raid alarm and ordered all aircraft into the air.

The 1-V-2 squadron scrambled all eight of its available D.21's as the first wave of He.111's delivered their deadly loads onto the airfield. Taking off among the falling bombs, the Dutch fighters found themselves immediately engaged by the German Bf.110 escorts (II/*ZG.1*). The Dutch flight leader, 1Lt P. J. B. Ruijs de Perez (#222), was quickly shot up, wounded, and crash-landed at Monster. His wingmen engaged the first formation of Ju.52/3m's approaching from the east, Sgt G.K.P. Kiel (#216) shooting down one tri-motor transport (I/*KG zbV.1*) just as the paratroopers began jumping out. (See Note 3.) Afterwards he landed at Ruigenhoek.

The other Fokkers were heavily engaged by the *Zerstörer* escorts (II/*ZG.1*). Sgt J. Eden claimed a Bf.110C shot down, but as he landed back at Ypenburg, his aircraft (#247) was strafed and set on fire; he escaped safely. (The strafing also destroyed the unserviceable #227.) Sgt J. Linzel also claimed a *Zerstörer* destroyed but soon he was badly wounded and bailed out of his stricken machine (#246) over Pijnacker. Sgt P.J. Aarts (#216) claimed a third Bf.110 shot down and afterwards landed at Ockenburg. In fact, none of the Bf.110's however badly damaged in their combats with the D.21's were lost by *ZG.1*. (See Note 4.)

2Lt G. Steen, the leader of the squadron's second patrol, had no luck at all that day. In the initial engagement, he found that his guns would not work and amid the chaos of the German attack, landed to find out that the valve to the compressed air system, which charged the four machine guns, had not been opened! Taking off again (in #215) with one wingman he became heavily engaged with the escorts but was unable to get in any telling shots. Finally he landed his D.21 on the beach at Kijkduin where it was strafed and burned and returned to his unit via tram!

His wingman, 2Lt A.M. van de Vaart (#212) intercepted and shot down a Do.215B reconnaissance aircraft (from 2(F)/ObdL claimed as a "Do.17") over Kagerplassen, a group of small lakes northeast of Leiden. However, his Bristol Mercury engine was damaged by the German's return fire and stopped, but he was close enough to Schiphol to glide "dead stick" into that damaged airfield.

Finally, 2Lt F.G.B. Droste (#228), separated from his wingman (Sgt Aarts) early in the battle, shot down a Ju.88A (most probably from I/*KG.30* - see Note 6) and landed at Ockenburg afterwards, rejoining Sgt Aarts there. They were joined by a pair of DB-8A's, but soon found this airfield under attack by paratroopers and assault-landing Ju.52/3m's. The DB-8A's were destroyed and the two D.21's were damaged in the subsequent ground fighting. (These two D.21's were later repaired and transported to Germany for test flying at Rechlin; one of them as early as June 10, 1940, less than a

month after the close of the campaign.)

Except for Sgt Kiel's D.21 at Ruigenhoek, 1-V-2.LvR was wiped out. As he attempted to fly back to Ypenburg, he was attacked by five Bf.110s and shot down. Badly wounded in the head, he crash-landed near Leiden and was taken to a hospital for treatment. This made the unit's destruction complete. For the loss of three D.21's in air-to-air combat and three pilots wounded (and five other D.21's destroyed on the ground), 1-V-2.LvR accounted for one Bf.110C, one Ju.88A, and one Ju.52/3m destroyed. Lt van de Vaart and his D.21 (which was soon repaired) joined 2.JaVA at Schiphol for the time being.

Similarly, the eleven DB-8A/3N's of 3-V-2 squadron struggled to get into the air as makeshift fighters. After the D.21's of 1-V-2, they raced along the airfield amid the eruption of bomb blasts and climbed laboriously into the air. One of the DB-8A's (#387), damaged by exploding bombs as it took off, had its left wing come off in the air, the crew successfully bailing out.

Almost before they were airborne, the rest were beset by Bf.110 escorts sweeping in at low altitude and almost immediately six were shot down. Eight of the twelve crewmen involved were killed. One of them, 2Lt H.W. Guijt (#382), may have succeeded in shooting down an approaching Ju.52/3m transport (I/KG zbV.1) before being shot out of the sky. Another, 2Lt J. van Riemsdijk (#388) followed Lt Ruijs de Perez's small formation of D.21's into battle and may have accounted for a second transport. His aircraft was attacked by five *Zerstörers*, and soon his machine was on fire and his gunner killed, so he bailed out. (See Notes 3 and 7.)

However, even the remaining four DB-8A's were unfortunate. One (#390), being damaged by the horrific and indiscriminate Dutch AA fire, made an emergency belly landing near Delft. Two others landed at Ockenburg (#389 and #391) only to be lost in the ground fighting that ensued there. And the last (#384) crash-landed at Rozenburg, an auxiliary airfield with insufficient repair capability to get the "Douglas" into the air again. Thus, this unit, too, was totally wiped out in its first mission.

On the ground at Ypenburg, the bombing or subsequent fighting destroyed one remaining (unserviceable) DB-8A (#383), an FK.43 light liaison plane (#960) and the *Veldleger* Commander's personal transport, a DH.90 Dragonfly (#962).

After the German bombers, which by and large did minimal damage and left the Dutch AA batteries untouched, came the transports met by fierce Dutch AA fire. This was provided by six batteries of 20-mm Oerlikon and 40-mm Bofors AA guns whose rapid-fire action was deadly against the large, slow moving transports. As the 42 Ju.52/3m's (I/KG zbV.1) carrying paratroopers approached at 0445, the heavy AA fire caused them to split up and most missed the drop zones. Some 60 *fallschirmjäger* landed south of Delft, others on the airfield and into the Dutch defensive positions to the east. They were too few and too widely scattered to subdue the Dutch defenders especially the many active AA guns before the arrival of the air-landing infantry transports. Only 23 Ju.52/3m's were able to return to Germany that morning.

Of the first wave 13 Ju.52/3m's of KGr zbV.9 (of KG zbV.2) arriving at 0525 with the first assault company of IR.65 on board, Dutch AA fire flamed eight. The rest attempted

assault and emergency landings on the airfield only to be ripped apart by land mines and the obstacles strewn in the landing area. Only two of the first wave survived. In subsequent waves, it was the same: transports falling in flames or crashing into the well placed barricades. The airfield was soon cluttered with wreckage, but the transports kept coming in until there was no longer any space left in which to land. In all, KGr zbV.9 lost 30 Ju.52/3m's in the air assault on Ypenburg. In fact, the aircraft carrying MajGen von Sponeck, which was supposed to have landed at Ypenburg, diverted instead to Ockenburg due to the intensity of the Dutch AA fire, thus removing him from most of his command.

At the Ockenburg and Valkenburg the scene was repeated. The KGr zbV.1 pilots had trouble identifying the two auxiliary airfields, or were scattered by Dutch AA fire, and they deposited their paratroopers too far away from their objectives to be effective. Unaware that the airfields were not secured, the KGr zbV.2 pilots blundered into the fully-alerted and accurate Dutch AA fire, many crashing on their approaches to the landing zones. Soon the German transports were forced to land on The Hague-Rotterdam highway or crash-land on the beaches and coastal dunes, spreading their human payloads out in many small packets. KGr zbV.11 (delivering IR.47) lost 34 transports at Valkenburg and strewn along the Katwijk beach, while KGr zbV.12 (carrying more of IR.65) suffered even worse, losing 37 Junkers tri-motors at Ockenburg and Ypenburg.

On the ground, the two Dutch infantry divisions of I Corps were alerted and immediately began to move towards the endangered airfields. Fierce battles raged at all three bases and by the end of the day the Germans were pushed off the airfields, MajGen von Sponeck was wounded and some 1,500 German infantrymen were captured. These were mainly from the smaller pockets of German troops scattered about the countryside, leaving, by the end of the day, only four groups of invaders, the largest numbering about 800 men.

Realizing that the initial objectives of the assault were beyond reach, MajGen von Sponeck radioed *Luftflotte 2* headquarters (HQ) for instructions. Gen Kesselring ordered the scattered units to fallback towards the bridgehead in Rotterdam. But the German infantry forces were too dispersed for such organized movement and could only fallback into neighboring villages and dig into defensive positions there. The forces landed on the beaches were destroyed in detail, their Ju.52's almost all of them being damaged beyond repair.

End Notes

1. The *Luftwaffe* Loss Reports for 10 May 40 include no losses of Ju.87's over Holland, only five Bf.109's (all known to have been destroyed elsewhere) and no more He.111 losses than the eight described elsewhere in this account. The III/KG zbV.1, delivering paratroopers to Waalhaven, reported no Ju.52/3m's lost in the airborne assault. The KGr zbV.9 and I/KG zbV.172, delivering air-land infantry and their heavy weapons, lost three Junkers all attributed to *flak* at Waalhaven. However, it is just as likely that two of these transports were lost to the patrolling G.1's as to Dutch AA fire. No other Ju.52/3m's were reported lost at Waalhaven, even in the subsequent ML and RAF bombings of the airfield.

2. *Luftwaffe* records for 10 May 40 report that III/KG.4 lost five bombers in the attack on Schiphol. Two were He.111's, most probably downed by the T.5's as described. The others were three Ju.88's from 9/KG.4. Of these, one was shot down by Flt Sgt Hateboer from 1.JaVA at De Kooy and another by 1Lt Sluijter of 2.JaVA. The third Ju.88 may have fallen to one of the other two T.5 crews claiming victories over unknown aircraft.

3. At Ypenburg, I/KG zbV.1 lost five Ju.52/3m's approaching the target area all attributed to *flak* and another 14 in crash-landings around The Hague as they attempted to deliver their paratroopers (I/FJR.2) onto the three target airfields. Given the very confused combat situation, it is impossible to verify the Dutch pilot claims. However, the slow speed and level, non-maneuvering flight paths of the Junkers transports, their vulnerability due to the lack of armor or self-sealing fuel tanks, and fact it was a "target-rich" environment makes it difficult to believe that these three claims are not valid.

4. The 4/ZG.1 lost one Bf.110C over Holland on 10 May 1940. This was the aircraft of *Unteroffizier* (*Uffz* Corporal) H. Voss, which crashed near Goes on the South Beveland Peninsula. Apparently the aircraft was badly damaged by Dutch AA fire during the dawn strafing attack on Vlissingen (Flushing) airfield, home of the Elementary Flying School, and crashed alongside a canal lock as *Uffz* Voss attempted to return to Germany. One Fokker S.4 biplane trainer (#118) was damaged in the attack.

5. Interestingly, I/KG.30 reported the loss of four

Ju.88's three to "Dutch fighters" and one to *flak* over South Holland (the province containing The Hague and Rotterdam). No G.1 pilots claimed Ju.88's destroyed. One of these was probably the one claimed destroyed by 2Lt Droste of 1-V-2.LvR. The other two reported lost to "Dutch fighters" were either lost to *flak* (which is conceivable given the high numbers of other German aircraft destroyed around The Hague by Dutch AA fire), were misidentified as "Bf.110's" or "He.111's", or they were caused by D.21's and DB-8's which either did not survive the battle or did not witness the actual destruction of their target(s) and thus did not report the engagement as a "kill".

6. The six DB-8A's shot down were:

#381 1Lt P.T. Bierema and observer-commander 1Lt W. Faber Killed in Action (KIA)
 #382 2Lt H.W. Guijt bailed out and survived; observer-commander 1Lt J. Vonk KIA
 #385 2Lt G.J.E. Scheepens and observer-commander 2Lt G. Vermeulen KIA
 #388 2Lt J. van Riemsdijk bailed out and survived; gunner Sgt G. Hagen KIA
 #392 Sgt J.A. Kuhn and gunner Sgt J. Staal bailed out and survived
 #393 2Lt H. Pauw and gunner Cpl L.M.J. Ballangee bailed out but were killed

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Photograph Captions (Photos are from Doug Dildy's collection, unless otherwise noted.)

A. Fokker C.5d-RR (#648) of the Advanced Flying School at Soesterberg in late 1939. This view shows to good effect the orange "Neutrality Markings" which went into effect 1 October that year. With the increased threat of war, the school re-located to Haamstede airfield on the seacoast. This aircraft was transferred to IVe Verk Gp when that unit, decimated by *Luftwaffe* air raids on its base at Gilze-Rijen, arrived on May 10th. A strafing attack by 20 Bf 109E's on the morning of May 13th destroyed it and all other C.5d's remaining at Haamstede, save one. (Photo from the Frits Gerdessen Collection)

B. A pair of Fokker D.21's (#237 and #241) from 1.JaVA formation flying. 2Lt Herman Doppenberg is piloting #237. This aircraft was subsequently destroyed in a fatal crash in bad weather near Rotterdam on 22 Nov 1939. Aircraft #241 was lost on the morning of May 10th while 2Lt Jan Bosch was returning to De Kooy airfield after his first patrol. Strafing Bf 109E's set it on fire as he landed; Lt Bosch escaped safely.

C. Part of the line up of 3-V-2.LvRfc's 18 DB-8A's arrayed for inspection by the *Veldleger* Commander, LtGen J.J.G. Baron van Voorst tot Voorst, at Soesterberg airfield in early March 1940. Upon inspection the unit was declared operational. Aircraft #386 (front row) was lost in an accident a

few days later when it failed to pull out of a dive. Aircraft #394 thru #396 (rear row) were among those placed in storage at Ockenburg and were either lost in the fighting there or (#396) captured intact by the Germans.

D. Douglas DB-8A/3N (#390) being personally inspected by the *Veldleger* Commander that day. Anticipating the German air attacks, the DB-8A unit was withdrawn to Ypenburg airfield on 7 May 1940. On May 10th this aircraft took off in the midst of the *Luftwaffe* bombing raid and the pilot, Sgt J.J. de Bruijn, claimed one Ju 52/3m "probably" shot down. However, while diving to escape attacking Bf 110's, his DB-8A was damaged by Dutch AA fire and he belly-landed #390 near Delft. Both crewmen survived.

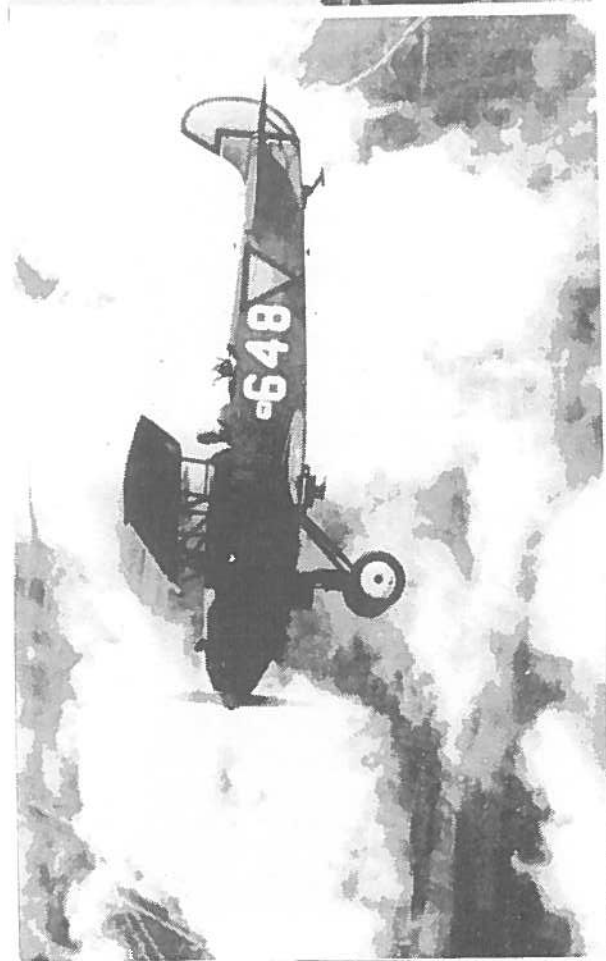
E. D.21 (#223) was destroyed on May 10th. Piloted by Flt Sgt Jaap van Zuijlen, this aircraft did not have a radio and he failed to see his patrol leader's signal to turn back to base. Subsequently Flt Sgt Van Zuijlen engaged a formation of He 111's and was shot down by their defensive fire, killing him. The aircraft crashed in Wassenaarse Slag, the coastal dunes north of The Hague.

F. The fighting was not all one sided, however. Fokker G.1's shot down a total of six He 111 bombers (and T.5 bombers claimed two more) on the

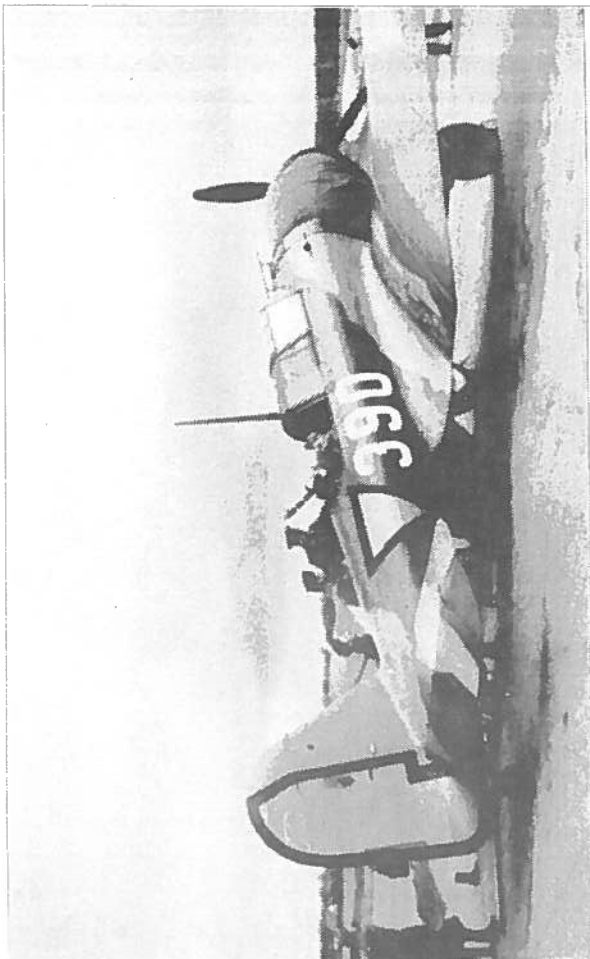
morning of May 10th. This example, burning after its crash-landing near Gorinchem, was actually downed by Dutch AA fire. Additionally at least three Ju 88's were also lost to Dutch fighters. (Photo from the Frits Gerdessen Collection)

G. But the Dutch air bases were heavily hit in the opening *Luftwaffe* air attacks. Here a Fokker C.10 (#704 or #707) of the *StratVerVA* lies wrecked amid its hangar at Bergen airfield. Ten C.10s, dispersed around the airfield's perimeter, survived the initial attacks and became the primary ground attack aircraft used against the air-landed infantry and the advancing enemy ground forces. Two of these were lost to Bf 109E's covering the German troops on May 10th. (Photo from the Frits Gerdessen Collection)

H. One of three (#309, #334, #335) of 3.JaVA's G.1's totally destroyed at Waalhaven airfield by the early morning *Luftwaffe* air raid. The remaining eight fighters were able to shoot down a total of seven German combat aircraft, but only one (#315) survived the day. The Fokker construction method is starkly revealed by the fire's results: metal tube frame fuselage pod with plywood covering (consumed by fire) and metal "nose cap", wooden wings (consumed by fire), all-metal tail booms and fins, and fabric covered rudders.



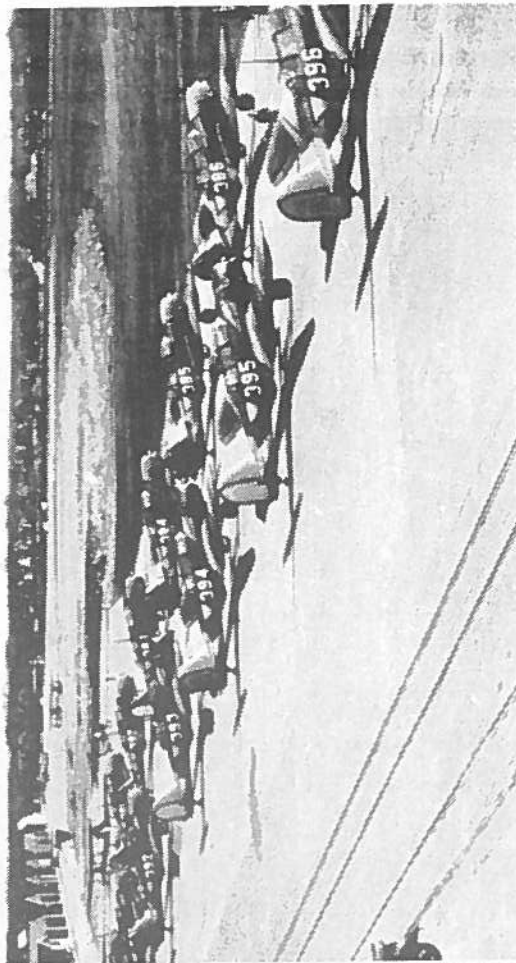
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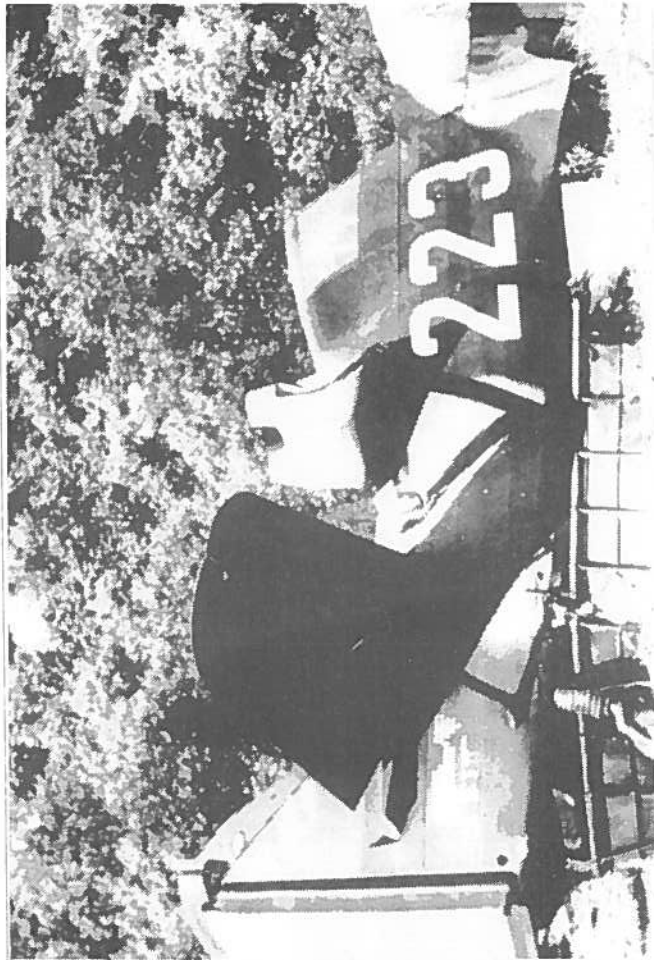
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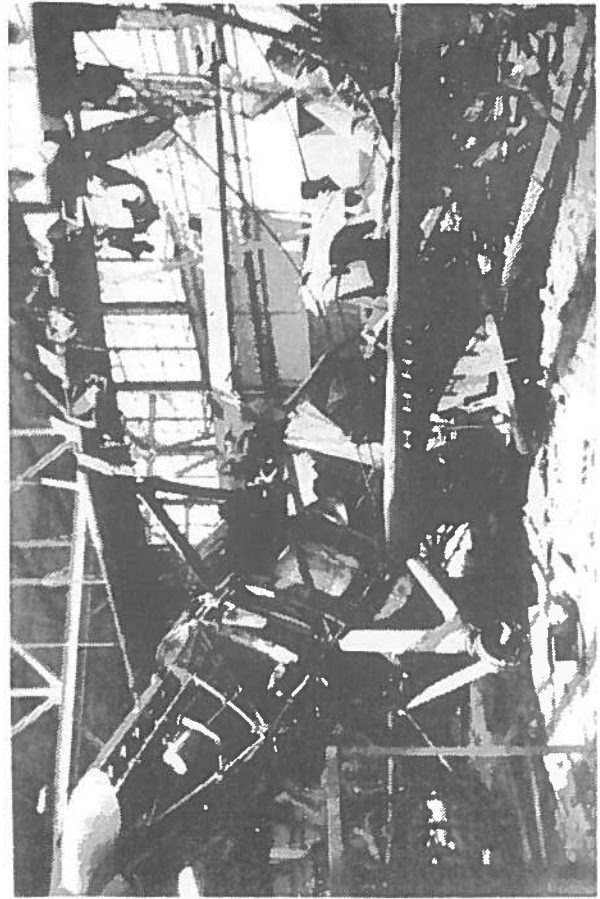
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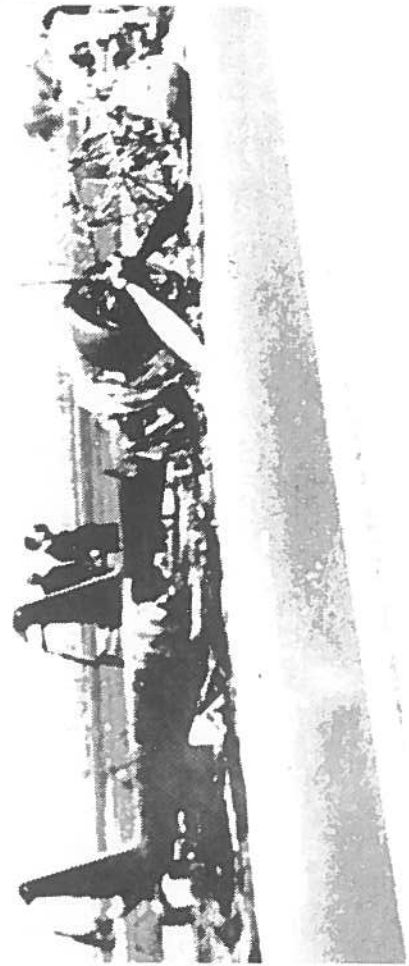
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H

Appendix 3

Militaire Luchtvaart Air-to-Air Victory Claims

Unit	Type	Pilot	Claim	Correlation
10 May 1940				
1.JaVA	D.21	Lt Van Overvest	Bf 109 over De Kooy	from 5(J)/TrGr.186
		Lt Van der Stok	Bf 109 over De Kooy	from 4(J)/TrGr.186
		Lt Doppelberg	Bf 109 over De Kooy	from 5(J)/TrGr.186
		Sgt Smits	Bf 109 over De Kooy	same as above
		Fit Sgt Hateboer	Ju 88 near Schiphol	from 9/KG.4
2.JaVA	D.21	Lt Sluijter	Ju 88 over Schiphol	from 9/KG.4
		Lt Plesman & Sgt De Geus	Ju 52/3m	none (1)
		Lt Sitter	Bf 109 over Rotterdam	none
3.JaVA	G.1	Lt Noomen	2 x He 111 over Waalhaven (2)	from II/KG.4
		Lt Sonderman	He 111 over Waalhaven (2)	from Stab/KG.4
			Do 17Z over Rotterdam	from AufklSt/7FIDiv
			Ju 52/3m over Rotterdam	probable but none reported (2)
			2 x "fighters"	none
		Lt Woudenberg	Ju 87	none
			Ju 52/3m	probable but none reported (2)
		SM Buwalda	He 111 over Rotterdam	from I/KG.4
			Do 215 over Rotterdam	from 2(F)/ObdL
		Sgt Souffree	He 111	none
			1 x "fighter"	none
1-V-2.LvR	D.21	Sgt Kiel	Ju 52/3m	probable but none reported (2)
		Lt Van Riemsdijk	Ju 52/3m	probable but none reported (2)
		Lt Droste	Ju 88A	from I/KG.30
		Lt Van de Vaart	Do 215B	from 2(F)/ObdL
		Sgt Aarts	Bf 110	
		Sgt Eden	1 x "fighter"	none
		Sgt Linzel	Bf 110	
3-V-2.LvR	DB-8	Lt Guijt	Ju 52/3m2	probable but none reported (2)
BomVA	T.5	Lt Swagerman	1 x "bomber"	
		Lt Windschut	1 x "airplane"	2 He 111 from III/KG.4 (3)
		Lt Hengel	1 x "bomber"	
		Lt Metzlar	1 x "aircraft"	
11 May 1940				
Combined JaVA	D.21	Lt Focquin de Grave	Bf 110 over Rotterdam	from 1/ZG.2
		Sgt Roos	Bf 110 over Rotterdam	none
BomVA	T.5	Pvt Wijnstra (gunner)	Bf 110 over Rotterdam	from 1/ZG.2
12 May 1940				
No claims made this date.				
13 May 1940				
4.JaVA	G.1	Lt Van Ulsen	Bf 109 over Woerden	none reported

Sources

Dutch: *Luchtverdediging in de Meidagen 1940*, by Colonel F. J. Molenaar, Table of "Air Force Operations"; English translation provided by Mr. Frits Gerdessen, 15 May 1992, pp. 1-8.

German: *Blitzed! The Battle of France, May-June 1940*, by Victor Bingham, Appendix 5, "Aircraft/Aircrew Losses" (reprint of Luftwaffe Quartermaster General Daily Returns of Aircraft Losses held at Imperial War Museum, London) (Surrey, UK: Air Research Publications, 1990), pp. 222-226.

Notes

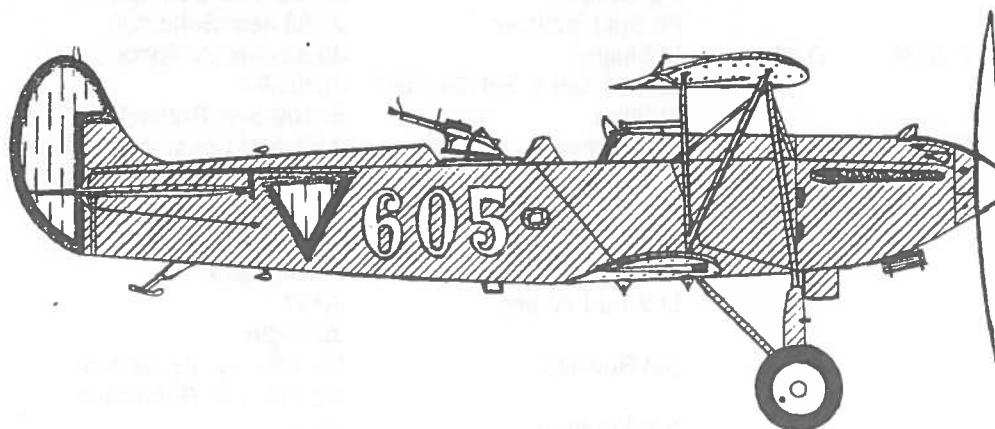
1. In spite of the lack of mention in German sources of any Ju 52/3m's to D.21 or G.1 fighters, this loss most certainly occurred. It is well documented that the damaged aircraft crash-landed near Stolwijk, southeast of Gouda, resulting in nine German POWs, all sent to Canada for the duration of the war.

2. German source attributes loss to anti-aircraft fire ("flak").

3. German source attributes loss of two He 111 of III/KG.4 to D21's.

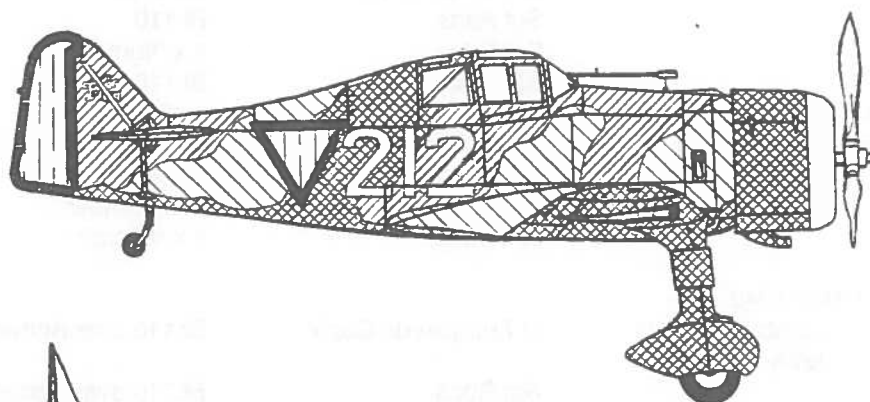
Aircraft of the 2e Luchtvaart Regiment

3rd Group "Ille Verkenning Groep"

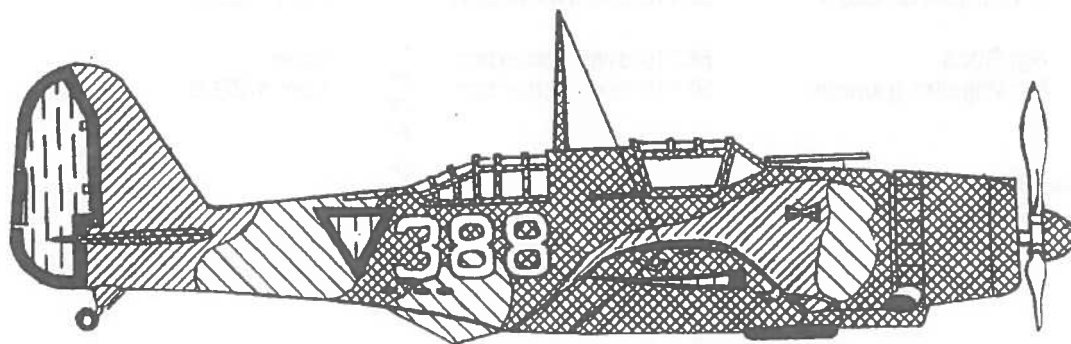


Fokker C.5d #605

5th Group "Jachtgroep"



1-V-2.LvR
Fokker D.21 #212



3-C-2.LvR
Douglas DB-8A/3N #388

Color Key			
	Bare Metal (Silver) FS 17178		Med Hvy Sepia/ Goldenrod (Sand) FS 30257
	Dutch Insignia Orange FS 22510		Med Hvy Sepia/ Sienna Brown FS 20100
	Black/ Rubber		Olive Green FS 34138

SOURCE: D.XXI in Dutch and Danish Service, by Warren Eberspacher, St. Paul, MN: Phalanx Publishing Co., 1994, pg 41

Captions for Aircraft Drawings

Aircraft of the 2nd Luchtvaart Regiment, 1940

A. Fokker C.5d #605, IIIe Verkennings Groep. Originally purchased in 1925 as a C.6 army observation aircraft powered by a 350-hp Hispano-Suiza engine, this was one of 27 C.6s re-engined with the 580-hp Rolls Royce Kestrel IIB and re-designated C.5d-RR s. Assigned to the IIIe Verkennings Groep at Ruigenhoek airfield in 1940, this aircraft was launched on five combat missions during Meidagen. The last, flown by Sgt C.L.J.P. Bakx, was an attack on German forces facing the Grebbeberg positions. Intercepted by Bf 109E's (II/JG.27) it was the only one of the three attacking aircraft to survive the engagement. Repaired, it was one of four C.5d's ready for combat on May 14th, the day the Dutch capitulation took effect. Source: KLu Vliegtuigen by Wim Schoenmaker and Thijs Postma, pg 43.

B. Fokker D.21 #212, 1-V-2.LvR. The first production example of the D.21, #212 was used as a test

machine before being assigned to the peace-time JaVA at Schiphol. Following repair of damage sustained in a mishap, the aircraft was assigned to 1-V-2.LvR at Soesterberg on Nov 1st, 1939. On May 10th, 1940, at Ypenburg, this aircraft was one of nine D.21's that took off in the midst of the German air attack. 2Lt A.M. van de Vaart intercepted German raiders and shot down a Do 125 belonging to the 7th Airborne Division's reconnaissance squadron. However, his engine was damaged by the Dornier's return fire and Lt van de Vaart landed it "dead stick" at Schiphol, making #212 the only D.21 of 1-V-2.LvR to survive the initial battle. Transferred to the "Combined JaVA" for the duration of the campaign, the aircraft flew another two missions, was damaged once, and finally was burned on the evening of May 14th to prevent capture following the Dutch surrender. Source: Nederlandse Militaire Luchtvaart Fokker D.XXI (part 1), Frits Gerdessen, pp 14, 23.

C. Douglas DB-8A/3N #388, 3-V-2.LvR. Received from the USA on Sep 29th, 1939, this aircraft was one of eleven operational on the morning of May 10th. Taking off amid the bomb explosions, 2Lt J. van Riemsdijk, with Sgt G. Hagen manning the rear machine gun, followed three 1-V-2.LvR D.21s attacking the incoming Ju.52/3m transports. Lt van Riemsdijk may have shot down one Ju 52. Sgt Hagen had trouble with the Browning-FN M-36 machine gun and after attacking the transports, the DB-8A was in turn attacked by five Bf 110's. Sgt Hagen was killed, the aircraft was set on fire, and Lt van Riemsdijk bailed out. He parachuted to safety and was driven to a hospital. The aircraft crashed near Voorschoten. Source: KLu Vliegtuigen by Wim Schoenmaker and Thijs Postma, pg 70.

Appendix 4

Luftwaffe Losses Over Holland

Unit	Type	Attributed To	Most Probable Cause
10 May 1940			
5/JG.26	Bf 109E	Shot down by D.21 near Grebbeberg	Unknown
9/JG.26	Bf 109E	Shot down by D.21 over Moerdijk	Dutch AA fire at Ypenburg (1)
4(J)/TrGr.186	Bf 109E	Crash-landed at Leeuwarden afld	by Lt Van der Stok of 1.JaVA
5(J)/TrGr.186	Bf 109E	Shot down by D.21 over De Kooy afld	by Lt Van Overvest of 1.JaVA
5(J)/TrGr.186	Bf 109E	Shot down by D.21 over De Kooy afld	by Lt Doppenberg and Sgt Smits of 1.JaVA
4/ZG.1	Bf 110C	Shot down by D.21 over Holland	Dutch AA fire over Vlissingen
Stab/KG.4	He 111	Shot down by flak over Waalhaven	Credited to Lt Sonderman of 3.JaVA
I/KG.4	He 111	Shot down by G.1 over Waalhaven	Credited to SM Buwalda of 3.JaVA
II/KG.4	4 x He 111	Shot down by flak over Waalhaven	2 x Credited to Lt Noomen of 3.JaVA
			2 x Credited to Lt Kuipers of 3.JaVA
III/KG.4	2 x He 111	Shot down by D.21 over Holland	Possibly by BomVA T.5 commanders
9/KG.4	3 x Ju 88A	Shot down by G.1 over Schiphol	One by FS Hateboer, 1JaVA
			Other by Lt Sluijter, 2JaVA
Stab/KG.30	Ju 88A	Shot down by Dutch fighter over S. Holland	Credited to Lt Droste of 1-V-2.LvR
I/KG.30	2 x Ju 88A	Same as above	No correlation
I/KG.30	Ju 88A	Shot down by flak over South Holland	Dutch AA fire over Vlissingen
Stab/KG.54	He 111	Shot down by D.21 over Den Helder	No correlation. See next entry
8/KG.54	6 x He 111	Shot down by D.21 over Den Helder	2 x Shot down by RAF Hurricanes
			4 x Shot down by French MS.406s over Antwerp
2(F)/ObdL	Do 215B	Missing	by Lt Van de Vaart of 1-V-2.LvR
2(F)/ObdL	Do 215B	Missing	by SM J. Buwalda of 3.JaVA
AufkSt/7FIDiv	Do 17Z	Missing	by Lt Sonderman of 3.JaVA
Staffel	4 x He 59	Destroyed by Dutch artillery in Rotterdam	
Schwidlen			
I/KGzbV.1	5 x Ju 52	Shot down by flak near The Hague	
I/KGzbV.1	14 x Ju 52	Crashlanded near The Hague	
Stab/KGzbV.2	2 x Ju 52	Crashlanded near Delft/The Hague	
Stab/KGzbV.2	Ju 52	Destroyed by Dutch forces at Valkenburg	
3/KGrzbV.9	Ju 52	Shot down by French Navy Potez 631 fighter. Confirmed.	
KGrzbV.9	Ju 52	Shot down by flak at Waalhaven airfield	
KGrzbV.9	4 x Ju 52	Destroyed by Dutch forces near The Hague	
KGrzbV.9	3 x Ju 52	Shot down by flak at Ockenburg	
KGrzbV.9	11 x Ju 52	Crash landed at Ockenburg/Ypenburg	
KGrzbV.9	10 x Ju 52	Crash landed at Delft/The Hague	

KGrzbV.11	34 x Ju 52	Destroyed by Dutch forces at Valkenburg
KGrzbV.12	11 x Ju 52	Shot down by flak at Ypenburg
KGrzbV.12	6 x Ju 52	Shot down by flak at Ockenburg
KGrzbV.12	20 x Ju 52	Destroyed by Dutch forces at Ockenburg
I/KGrzbV.172	2 x Ju 52	Shot down by flak at Waalhaven afld

11 May 1940

1/JG.27	Bf 109E	Shot down by D.21 over Ziel	No correlations
1/ZG.2	2 x Bf 110C	Shot down by D.21 over Holland	1 x Credited to Lt Focquin de Grave
			1 x Credited to T.5 gunner Pvt Wijnstra
3/Kü.906	3 x He 115	Crashlanded at Vlissingen	

12 May 1940

JG.51	3 x Bf 109E	Shot down by D.21 over Noordijk	No correlations
3/KGr.126	He 111H	Shot down by flak over the IJsselmeer	
1(F)/121	Do 17P	Shot down by D.21 near Amsterdam	No correlations

13 May 1940

None

14 May 1940

II/KG.4	He 111	Shot down by D.21 over Holland	No correlations
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Source

Blitzed! The Battle of France, May-June 1940, by Victor Bingham, Appendix 5, "Aircraft/Aircrew Losses," (reprint of *Luftwaffe Quartermaster General Daily Returns of Aircraft Losses* held at Imperial War Museum, London) (Surrey, UK: Air Research Publications, 1990), pp. 222-226.

Notes

1. JG 26 *Top Guns of the Luftwaffe*, by Donald L. Caldwell, New York: Ivy Books, 1991, pg 17 describes this loss (Lt Wolfgang Ludewig) very well.

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Sukhoi Su-27, 1/72-scale decals. HDL #72050. Hi-Decal Line, Klininskiego 22, 40-062 Katowice, Poland.

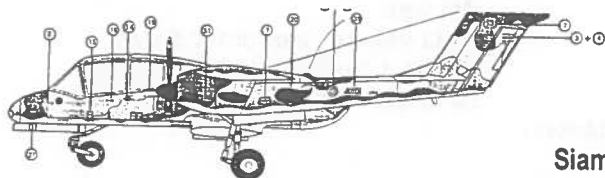
On this sheet, you will find markings for Flankers from Ethiopia, Eritrea, Indonesia, and Angola. Aircraft covered are four single seaters and two trainers, all in highly interesting camouflage schemes. The quality of these decals and instructions are on the usual high level expected from HDL. The only problem is which one to choose. Or, should I build them all?

Nils Treichel (SAFCF #1467), Grosser Platz 4,

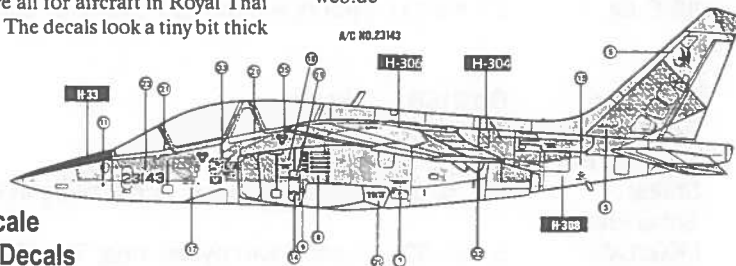
27432 Brenneroerde, Germany. nrtreichel@vr-web.de

Siam Scale Decals. Siam Scale Decals is a new-comer among the decal companies of the world and its products are a bit difficult to find. I bought two sheets from Flightdecs, a Canadian mail order company specializing in decal sets. One sheet was for the Sikorsky H-19/S-56. The other was for Alpha Jets and Broncos. The markings, as is typical for this company, are all for aircraft in Royal Thai Air Force markings. The decals look a tiny bit thick

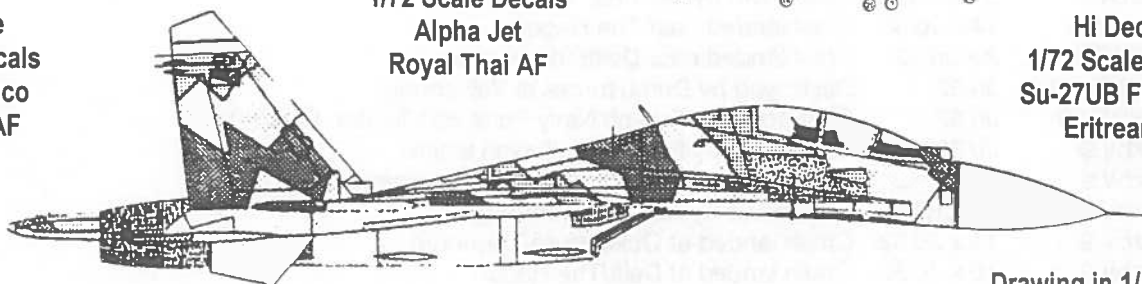
and quite glossy, but otherwise alright. One set of stencils is provided for both the Alpha Jet and the Bronco. The national insignia consists of separate rings, so any alignment errors are your fault. The instructions consist of black & white three-views with the colors FS coded. However, there is also a color photo of a drawing showing the schemes. Nice stuff and there is a whole range coming. Nils Treichel (SAFCF #1467), Grosser Platz 4, 27432 Brenneroerde, Germany. nrtreichel@vr-web.de



**Siam Scale
1/72 Scale Decals
OV-10C Bronco
Royal Thai AF**



**Siam Scale
1/72 Scale Decals
Alpha Jet
Royal Thai AF**



**Hi Decals
1/72 Scale Decals
Su-27UB Flanker C
Eritrean AF**

Drawing in 1/144 scale

The Hawker Hart in Sweden

Lennart Andersson

The prototype of the two-seat Hawker Hart light bomber biplane flew for the first time in 1928. The RAF used the type operationally between 1930 and 1936, but about half of the almost 1000 examples that were built were used as advanced trainers (the Hart Trainer). Many aircraft of closely related types were produced for the RAF and for export - the Audax, Demon, Osprey, and others.

In the summer of 1932 Hawker's demonstration machine (G-ABTN) was shown at Ljungbyhed, where the *Flygvapnet* (Air Force) flying school was located, and at Bulltofta airport, Stockholm. The Hart seemed to be a suitable replacement for the Fokker C V (S 6) in the reconnaissance role and in December the same year three examples fitted with 580-hp Bristol Pegasus IM-2 engines were ordered for evaluation. They were designated S 7 (S for *spaning*, or reconnaissance). S/n 1301 underwent general handling and performance tests at Martlesham in April 1934 and one (s/n 1303) was fitted with floats and tested as a floatplane at Felixtowe in February. At this time the ability to land on, and take off from lakes and rivers was a requirement for army co-operation reconnaissance aircraft. The tests were probably also connected to the Swedish order for four Hawker Osprey (S 9) floatplanes, which was signed in March 1933.

The three S 7s were flown to Sweden on 18-19 May 1934 and were taken on charge at *Centrala Flygverkstaden i Malmöslätt* (CFM, later CVM) on 22 May. The Swedish test establishment, *Försökscentralen* (Fc), was located at CVM, which was one of the state-owned aircraft factories. Being reconnaissance aircraft, the Harts ought to have been assigned to army co-operation reconnaissance wing F 3, also at Malmöslätt, but they were instead allotted to F 1 at Västerås. In the event, they were to remain with CVM (Fc) for dive bombing trials until April 1936, July 1937 and June 1936, respectively.

Dive-bombing Tests

After a decision had been taken to arrange experiments with dive-bombing, the S 7 had been selected as a suitable type for this work. The first tests were made in the summer of 1934 under the leadership of Captain Björn Bjuggren. They took place between June and September at Malmen, Frösön, Barkarby and in the Stockholm archipelago. During a test period in September a total of 126 bombs were dropped during dives from 1500 to 600 m and from 4000 to 600 m. The long dives had to be made in three stages in order to prevent the speed from exceeding 400 km/h, which was the limit for maximum permissible speed. A very primitive sight was used at first, but later new types of dive-bombing sights were developed and tested. The diving angle was normally about 80 degrees.

Björn Bjuggren described the first dive bombing tests with the B 4 in his autobiographical book "Attack":

In the beginning we suffered from blackouts during recovery from the dives. All went black and we were simply blind. After a while we did not find the blackout so risky anymore. During the blackout we could hear the sound of the engine even if we could not see. If the aircraft was going down the engine's revolutions and the sound from the engine

increased. The pilot then carefully pulled at the stick. If the aircraft was ascending steeply the revolutions decreased and the engine was only heard as a low drone. The pilot then had to push the stick forward to avoid loss of speed and a possible spin. You had to try to keep the machine flying normally with soft handling of the controls until eyesight returned. The blackouts soon became fewer and fewer and only occurred when we recovered too abruptly after a dive.

A characteristic sound was heard from the struts and flying wires during the dive. It started as a low whining, which gradually increased until ending as a piercing, shrill crescendo during the recovery. It sounded like a war cry. The aircraft glistened in the sun during its almost vertical dive.

We found out that the diving angle was eighty degrees, if we were hanging in the seat straps over the engine and the aircraft seemed to be on its back. When we used that method the bombs hit closer and closer to the white bulls-eye on the ground. We had found 'the right tune'.

Licence Production

The tests had been successful and it was decided in November 1934 to adopt the Hawker Hart as a dive-bomber, or light bomber, as it was called. Already in May 1933 licence production of eight, later increased to nine aircraft, designated S 7A, had been ordered from CFM. The S 7A was to be fitted with the 675-hp Nohab My VIIA (licence-built Bristol Mercury VIIA) engine. A second squadron of 12 aircraft was ordered in October 1934. After further funds had been allocated, further contracts were signed in January 1935 with AB Svenska Järnvägsverkstäderna (ASJA) at Linköping and Götaverken in Gothenburg. Twelve aircraft were ordered from ASJA and three from Götaverken.

In November 1936 the ASJA order was increased to 15 complete aircraft and three additional machines in the form of spare parts without engines. The new production methods that were required to build the Hawker Hart took time to master and deliveries were significantly delayed. CVM delivered their machines between July 1936 and May 1939. ASJA and Götaverken handed over their S 7As during the period January to October 1937. The last three 'spare' aircraft from ASJA were delivered in May 1938, in fact as complete aircraft fitted with engines.

The three original S 7s were re-designated B 4 in April 1937 (B for *bomb*, or bombing), and their serial numbers were changed in September 1938 from 301-303 to 701-703. In January-March 1938 they were assigned to *Stabens flygavdelning* (the Staff Flying Section) at Barkarby, Stockholm, for general flying training, and were later transferred to F 8 wing. In March 1939 they were joined by s/n 705.

The aircraft ordered as S 7As were delivered with the designation B 4A to F 1 at Västerås from April 1937. 1. *flygkåren* (F 1) was originally to have been located at Uppsala, while 2. *flygkåren* was to be at Västerås. It was later proposed to locate both F 1 and F 2 at Västerås for budgetary reasons, but in 1928 the Swedish *Riksdag* decided to place only F 1 at Västerås. For the time being the new unit could use only seaplanes, however, as there was a seaplane station at Västerås but no airfield. An airfield was built at Hässlö, just

outside the city, and was completed in 1931. Several types were used, including the A 1 (Phönix C.I), J 1 (Phönix D.III), J 6 (Svenska Aero Jaktfalk), J 7 (Bristol Bulldog), S 6 (Fokker C V), and a number of training types. From the mid-1930s all *Flygvapnet's* new types, the B 3 (Junkers Ju 86K) bombers, B 4 light bombers and J 8 (Gloster Gladiator) fighters, were based at F 1.

Service with F 1 at Västerås

The first B 4, or S 7 as it was still known, arrived at F 1 from CVM on 17 April 1936. According to the mobilisation plan then in force, F 1 was to organise the 11th, 12th and 13th Bombing Squadrons with a total of 36 B 4s. The rate of delivery was slowly building up but by the end of 1936 F 1 had received only four aircraft.

From 1937, dive-bombing was part of *Flygvapnet's* basic operational training programme. The first dive-bombing course at F 1 was commanded by Captain Ragnar Carlgren and Björn Bjuggren served as dive bombing instructor. A total of six instructors and 22 students participated. About 20 B 4s were available. During August 1937, F 1 took part in an air defence exercise in western Sweden using temporary bases at Munkagård and Lindhult in the province of Halland. On 29 August, there was an air display at Torslanda airport in Gothenburg. At the end of September, the *Flygvapnet* Commander-in-Chief inspected the course. A successful attack against a mock-up anti-aircraft battery made a strong impression on both higher officers and invited newspaper reporters.

F 1 had a maximum of 25 B 4s, before the aircraft were handed over to F 4 at Frösön in the north of Sweden. The transfer started in December 1937, when eight were flown to their new home base. The others followed over a period until March 1938. F 1 retained two machines until September 1939, however, but by that time one had crashed. From January 1938 new deliveries were made directly to F 4. F 1, which was already equipped with the B 3 then concentrated on its designated role, heavy bombing.

F 4 at Frösön

Kungl Jämtlands Flygflottilj (F 4) had been set up at Frösön in the province of Jämtland in 1926. The unit's first aircraft, three S 1s (FVM S 21/S 25) and two A 1s (Phönix C.I) arrived in October, and more of these types were added later. Two of the S 1s were converted into ambulance aircraft. This type was later replaced by the S 6 (Fokker C V).

In July 1936, it was decided to reorganise F 4 as a light bomber unit. Major Georg Gärdin, who had commanded F 4 since August 1934, was replaced by Major Egmont Tornberg in 1937. During the summer of 1938, the whole unit moved to Karlsborg because of extensive fieldwork at Frösön. By August 1938, the airfield, which now measured 1200 x 800 m, was finished with two 600 m concrete runways, a feature which few Swedish aerodromes could boast of at this time.

F 4 participated in an air defence exercise in eastern Svealand in September 1938, when it set up two squadrons and operated from Stigtomta, near Nyköping. New-built aircraft were delivered until May 1939, when F 4 had a total of 36 B 4s.

When the war broke out in September 1939, F 4 was mobilised as part of the *1. flygeskadern*. The 1st and 2nd

Squadron each had 12 aircraft and were based at Karlsborg for a period of one month. A depot squadron remained at Frösön. In December, *Flygvapnet's* order of battle was temporarily reduced by one light bombing (F 4) and one fighter squadron, since both personnel and equipment had been sent to Finland. (See below.) As no other aircraft were available when the new F 6 wing was about to be set up, F 4 had to release some of its already too few B 4s, starting with three in January 1940 and then another ten in March. In April-May 1940 F 4 s 1st Squadron was based at Gällivare in Lapland for neutrality patrol work.

Action in Finland

When the Finnish Winter War broke out on 30 November 1939, it was decided to send personnel and equipment in the form of a volunteer unit, first called F 101, which was later changed to F 19. This unit was to consist of 12 J 8A (Gloster Gladiator) fighters from F 8, and 12, later reduced to four, B 4s (s/ns 718, 729, 732 and 744) with pilots and personnel from F 4. The whole unit had a total of about 240 men. In addition, the Swedish Government presented five old fighters and three S 6s to Finland. F 19 s main base was arranged at Kemi in northern Finland. The unit's area of operations was the whole northern part of Finland and its planned duties included observation and attacks against communications, troops and airfields, and air defence of the cities Uleåborg, Kemi and Torneå.

The aircraft arrived at Kemi on 10 January 1940 and two days later the first mission was performed - an attack on Russian troops and an air base. Three of the B 4s were lost during the attack. The two aircraft flown by *Fänrik* Jung and *Löjtnant* Sterner collided while strafing Russian troops and at the same time trying to avoid anti-aircraft fire. Jung and Sterner baled out and were captured by the Russians. One of the observers, *Löjtnant* Zachau, followed his aircraft to the ground and was killed. Also the other observer, *Översergeant* Sundsten, was unable to leave his crashing aircraft, but survived and managed to endure a four-day walk back to friendly territory in 40 degrees below freezing point!

The pilot of the third machine, *Fänrik* Färnström, and his observer, *Sergeant* Hansson, were on their way back to their base when they were attacked by three Polikarpov I-15bis fighters. They tried to escape in a steep dive but were hit and force landed. The Russian fighters continued to strafe the aircraft and its crew, but they are not hurt and later manage to return to their own lines.

On 29 March, the remaining F 19 aircraft returned to F 4 and F 8. A fifth B 4 (s/n 730) had arrived from F 4 in mid-February as a replacement for those lost, but it was clear to all that the Hawker Hart was by now completely outdated.

The B 4 was scheduled for replacement by the B 5 (Douglas Northrop 8A-1), which was built in Sweden under licence. The first four examples of this type arrived at Frösön in April 1940, but deliveries were slow and when remaining B 4s were handed over to F 6 in October, only 22 B 5s had reached F 4. Two B 4s were retained and used for target-towing.

F 6 at Karlsborg

A field at Karlsborg had been used now and then by the Army aviation service since 1915. According to the

Riksdag's 1936 defence resolution, a second heavy bomber wing was to be located at Karlsborg. On 30 June 1938 this was changed into a light bomber wing and on 1 July 1939 the *Kungl Västgöta Flygflottilj* (F 6) was set up. Lieutenant-Colonel John Stenbeck was appointed commander of the new unit and stayed at this post until 1941, when he was replaced by Lieutenant-Colonel Gösta Hård. F 6's first aircraft was an Sk 11 (Tiger Moth) trainer.

The three B 4s that were transferred from F 4 on 23 January 1940 became the unit's first combat aircraft. Ten more arrived in March, but when F 6's 1st Squadron served as emergency squadron in April three extra B 4s and nine Sk 14 (North American NA 16-4M) trainers had to be borrowed from other units because of the general lack of combat aircraft. F 6 was scheduled to receive the 52 B 6 (Republic 2P-A Guardsman) light bombers that had been ordered from the USA, but only two of these were ever delivered.

Training activities were intensive at Karlsborg during the summer of 1940. One of the B 4s was fitted with dual controls in order to simplify pilot conversion, but several of the pilots had to be sent home for the time being because of the lack of aircraft. Another dozen B 4s were received in October, however, and training was resumed. In August and September F 6 took part in the large yearly *Flygvapnet* exercise with a staff unit (two Sk 11s, an Sk 14, a B 6 and a Tp 5 (Junkers Ju 52/3m)), the 1st Squadron (12 B 4s) and a B 6 and an Sk 14, which acted as stand-ins for the yet non-existent 2nd Squadron. In November two squadrons could finally be fully organised with eleven B 4s each.

A winter exercise was made in February 1941. The 1st and 2nd Squadrons and a staff unit equipped with three B 5s were based on the ice off Luleå in northern Sweden. Attacks were made with the whole unit against practice targets close to the Finnish border. Deliveries of the B 5 had started in December 1940 but it took a whole year until F 6 had received their full complement of 52 B 5s.

Second-line duties, target-towing and experimental work

The B 4 was now regarded as a second-line type and remaining aircraft were fitted with target-towing gear. With the exception of two machines, which were retained by F 6, they were distributed to other wings in 1941. During a period from June to November F 1, F 7, F 8, F 9, F 10 and F 11 received B 4s. A few were later moved from these wings to F 12, F 17 and F 21.

Because of technical problems with the B 16 (Caproni Ca 313s), F 7 wing at Sätenäs had to borrow aircraft from other units in October 1941: eight B 5s for its 1st Squadron and six B 4s for the 2nd Squadron. In addition, two B 4s had been received earlier for target-towing. The B 5s were returned in the spring of 1942 and the B 4s were taken over by F 7, but at the end of 1942 five of them were passed on to other wings.

One aircraft (s/n 706) had remained at CVM (Fc) for experimental work until 1943. Aga Baltic dive-bombing sights were tested in the summer of 1936 and spring and summer of 1937 in s/n 707. In the autumn of 1936 the same aircraft was fitted with equipment for spraying of 'training liquids' in connection with a war gas protection course. In the spring and summer of 1937, s/n 705 was used in experiments with gas spraying equipment and different smoke screen gener-

ators.

In 1938, two B 4As (s/ns 705 and 711) were fitted with the 755-hp Bristol Perseus XI for evaluation. The first flight with the new engine was made in January 1939. The modified aircraft received the designation B 4B, but were converted back to B 4As after the completion of the tests in 1941.

The last eight B 4s were written off and scrapped in 1947, but one, s/n 714, was retained and is today displayed at the *Flygvapenmuseum* at Linköping. Although it never served in Finland it is painted in F 19 markings.

Markings and camouflage

The S7/B 4 was initially painted in silver grey all over. From 1938-39, they carried standard *Flygvapnet* camouflage: dark green upper surfaces and light blue-grey undersides. Until 1937, the national insignia consisted of three black crowns, alternatively three black crowns on a white circle, on the wings and fuselage, and vertical yellow and blue rudder stripes. In May 1937, the roundel colours were changed to yellow crowns on blue background and the rudder stripes were discarded. In June 1940, a yellow outer ring was added to the roundel. During the period June 1940 to December 1944, the roundels were not painted on the upper surfaces of the wings.

The first three aircraft were assigned s/ns under the 1931 system, 1301-1303, which were painted on the fuselage sides. These were changed to 301-303, later 701-703, in the new system that was introduced in July 1935. The s/n was now painted on the aircraft with small digits only. The B 4As were numbered 704 to 745 (the first three were initially 304-306). In addition, two numbers were painted on either side of the fuselage roundel. The first number designated which wing the aircraft belonged to, the second the number of the individual aircraft. In June 1940, the individual aircraft number was moved to the fin and nose and painted with large white digits. From 1945, the colour of the wing designator was changed from black to yellow and it was placed behind the fuselage roundel on both sides of the fuselage.

The following codes were used on B 4s under the 1935 and 1937 marking systems: 1-51 to 1-57, 4-58 to 4-62, 1-63 to 1-65 and 4-66 to 4-76 (changed to 4-51 to 4-76). The first three became 6-51 to 6-53 ('6' for Staff unit) and later 8-71 to 8-73. 8-71 was for a period 1-70. The individual numbers were changed to start at '1', instead of '51', and with new deliveries the B 4s belonging to F 4 were numbered 4-4 to 4-45. 4-5 became 8-75, 4-59 was 1-59 before becoming 4-9, and 4-69 was 1-69 before becoming 4-19. All these numbers were assigned in s/n order.

Under the 1940 system, the B 4s transferred to F 6 were numbered from 6-1 to 6-11, 6-17 to 29 and 6-31 to at least 41. Several aircraft were renumbered. F 8's B 4s carried the numbers 8-74 to 76 and 55 to 58. Aircraft transferred to F 1, etc, carried the following identities: 1-70 to 72, 4-75 and 76, 6-37, 44, 45, 53, 54, 01, 02 and 07, 7-70 to 77, 9-50, 55 and 74 to 76, 10-44, 52 and 80 to 82, 11-70 to 72, 12-93 and 94, 21-6 and 7. Known identities used from early 1945 (* Not confirmed but likely): 1-70 and 72, 4-82, 6-7 and 8*, 7-70, 8-64, 9-76, 10-41, 11-70, 17-01, 26 and 77, 21-6* and 7*.

To create a type of winter camouflage, the B 4s sent to Finland were sprayed with silver grey colour in irregular patterns over the standard camouflage. Finnish national in-

signia, the blue swastika on a white circle, were carried on wings and fuselage. Letters (reportedly blue) were used as individual markings. 19-M, N and R are known. The missing aircraft were probably 19-O and P, as the replacement example was 19-R.

Hawker Harts in Flygvapnet service

Designation	Qty	Built by	S/ns (c/ns)
S 7 B 4	3	Hawker	301-303/701-703 (-)
S 7A B 4A	42	CVM, ASJA, Götaverken	704-745 (212-232, 51-65, 76-78, 1-3)
B 4B	2		705 and 711 modified temporarily

Specification and performance (B 4A)

Engine: My VII

Span:	11.35 m
Length:	8.56 m
Height:	3.15 m
Weight empty:	1400 kg
Weight loaded:	2300 kg
Maximum speed:	260 km/h
Ceiling:	6100 m
Armament:	4 x 50 kg or 12 x 12 kg bombs, two 8 mm ksp m/22 machine guns (one fixed forward-firing and one flexible)
Undercarriage:	Wheels or skis

[This article first appeared in the French magazine Avions and is reproduced here with the permission of their editor, Michel Ledet.]

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Photo captions (All photos from the author's collection unless otherwise noted.)

Page 59:

1. Before leaving England, the first Swedish Hart s/n 1301 underwent general handling and performance tests at Martlesham in April 1934.
2. The ability to land on, and take off from lakes and rivers was a requirement for Swedish army co-operation aircraft prior to World War II. The third Swedish Hart, s/n 1303, was fitted with floats and tested as a floatplane at Felixtowe in February 1934.
3. The three original Harts (Swedish designation S 7) lined up at Malmslätt after delivery in May 1934.
4. S/n 1301 in pre-1935 markings: black crowns on white circle and blue/yellow rudder stripes.

Page 60:

5. Close-up study of B 4 4-51 (701) of F 4 wing. The flexible machine gun has been fitted and the aircraft has been bombed up for a training mission.
6. The white circle of the national insignia was later discarded. B 4 1-53 (703) at Hässlö, Västerås, the home base of F 1 wing.
7. B 4 4-51 (701) fitted with skis. This was normal

practice during the wintertime. This aircraft belonged to F 4 at Frösön.

8. Line-up of B 4As ready for action, probably during an exercise.

Page 71:

9. Landing mishap with 4-52 (702) at Frösön. Note 1937-type national insignia with yellow crowns on blue circle.
10. A nice study of B 4A 4-59 (709) in the air.
- 11 and 12. Two views of 4-69 (719). In one of the photos the aircraft is fitted with an unknown device under the fuselage and a pennant seems to be attached to the trailing edge of the rudder.

Page 72:

13. B 4 8-71 (701) in dark green/light blue-grey camouflage in 1939. This aircraft was assigned to the Staff aviation section, later F 8 wing, at Barkarby, near Stockholm. (Lars-Olof Osmark).
14. An interesting photo taken at Karlsborg on 1 July 1940. It shows B 4A 4-20 (720) after its transfer to F 6 wing. It carries 1937 type markings, but a white 18 (1940 marking system) has just been

added at F 6.

15. B 4A 6-29 of 2nd Squadron, F 6, with the type of national insignia that was introduced in 1940.
16. Unsuccessful landing with B 4A 6-44. (Leif Fredin).

Page 38:

17. 6-14 (720) was one of the B 4As that was fitted with target-towing gear.
 - 18 and 19. Two views of 17-77 of F 17 in post-1944 markings. (Gustav Persson)
 20. In 1936-37 at least two types of spraying equipment for war gas or smoke screen liquid were developed and tested on B 4As at Försökscentralen, Malmslätt.
- Cover: The B 4B version was fitted with a Bristol Perseus XI engine for evaluation. Two aircraft were converted in 1938 and one of them, 8-75 (705), is seen here at F 8 in 1939. In the background is J 8 (Gloster Gladiator) 8-2. (Lars Lundin)

Estonian Hawker Hart

Alex Crawford

In 1932 the Estonian Government purchased a number of aircraft for its Aviation Regiment. Among the aircraft bought were four Avro 626 trainers, eight Hawker Harts, and four Czech designed Letov S-228E bombers.

The Harts were allocated the serial numbers 145-152. Four of the Harts were fitted with floats and became part of the Seaplane Flight based at Tallinn Mine Harbour, while the remaining four were operated by the 3rd Division. The seaplane Harts, 149-152, were fitted with a 525hp Rolls-Royce Kestrel II MS engines while the normal landplane aircraft had 480hp R-R Kestrel II engines.

With the outbreak of the Spanish Civil War, the Estonian Government saw an opportunity to sell off some of its obsolete aircraft and raise the necessary funds to purchase newer more modern aircraft. As a result, eight Bristol Bulldogs and a number of Potez 25a-2s were sold. These sales almost halved the effective strength of the Aviation Regiment and a number of changes took place. The Seaplane Flight was disbanded and their Harts were converted to landplane configuration and assigned to the 1st Division.

At the outbreak of the Second World War there were still seven Harts on strength. In June 1940 the Soviet forces

invaded the Baltic States. Part of the Estonian forces became the 22nd Territorial Corps of the Soviet Army. The Estonian air element consisted of a number of Harts and Henschel Hs 126B-1s. When the Germans invaded Russia in June 1941 the Henschels were flown out to safety but all other aircraft were destroyed.

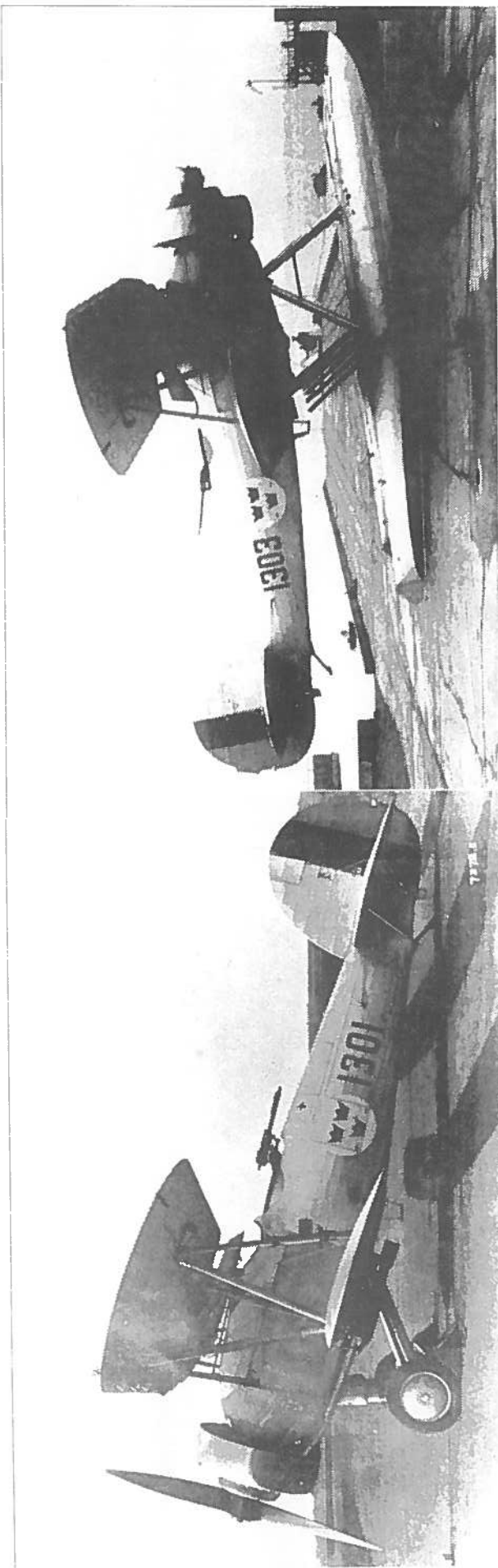
Colours and markings

Like most Estonian aircraft, the Harts were Natural Metal/Aluminium dope overall. National insignia was placed above and below the wings. The rudder was vertically stripped Blue/Black/White. Serial was placed on the fuselage in Black with a Blue shadow.

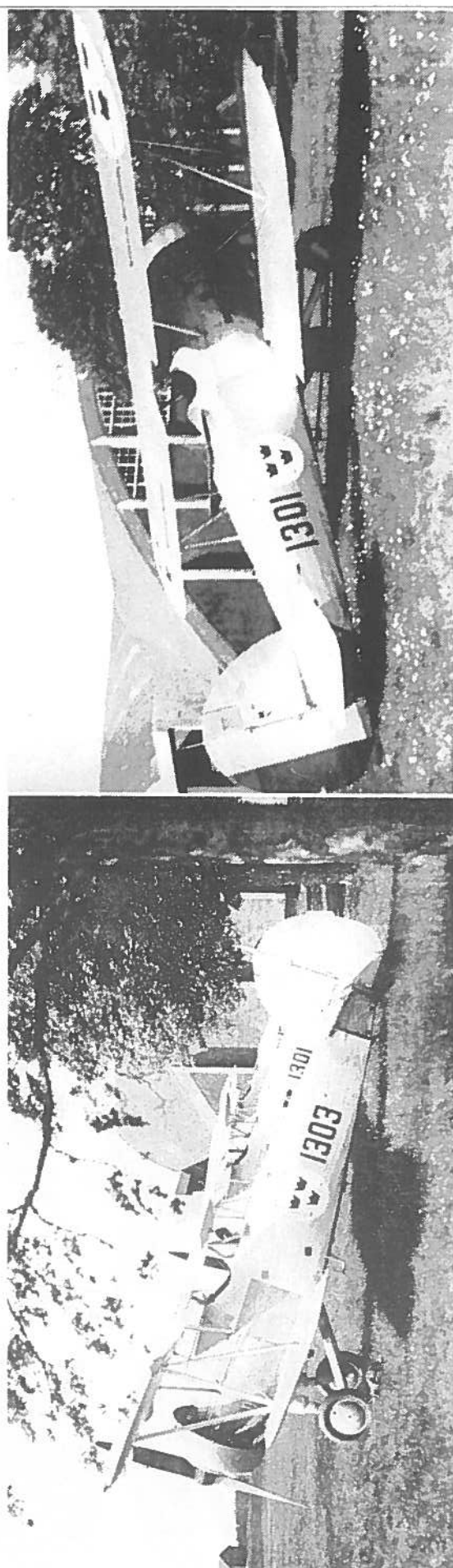
When the aircraft were taken over by the Soviets it is very probable that the Estonian markings were painted out and replaced by Red stars in a similar way that happened to the captured aircraft from Latvia and Lithuania.

If anyone can help with further information on the Estonian Harts, I would be very grateful.

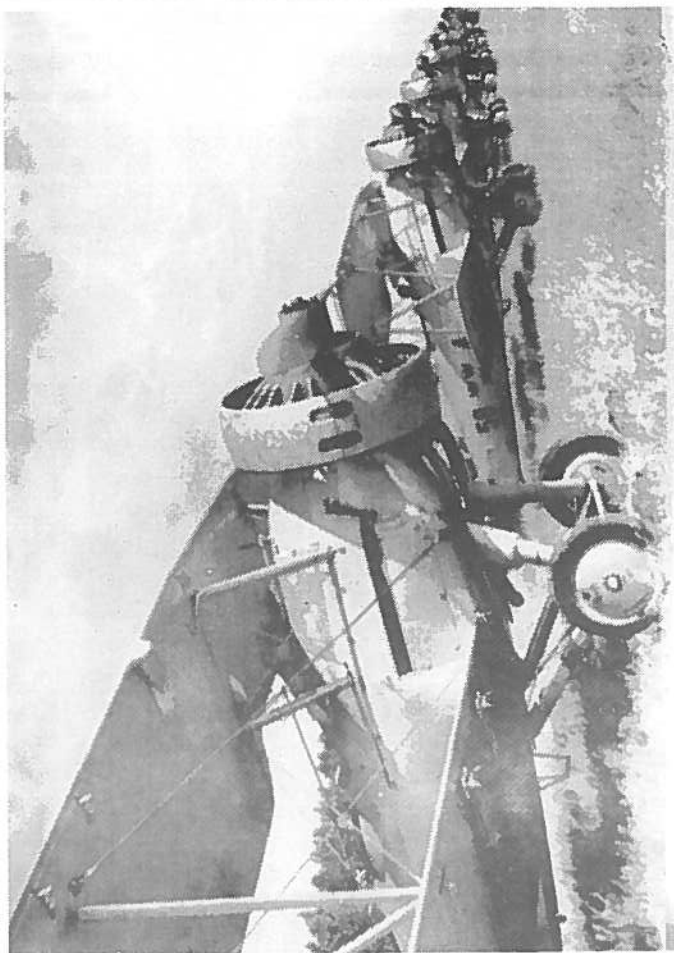
Alex Crawford (SAFCH #1619), 38 Durris Drive, Glenrothes, Fife, Scotland. acrawford@blueyonder.com.uk



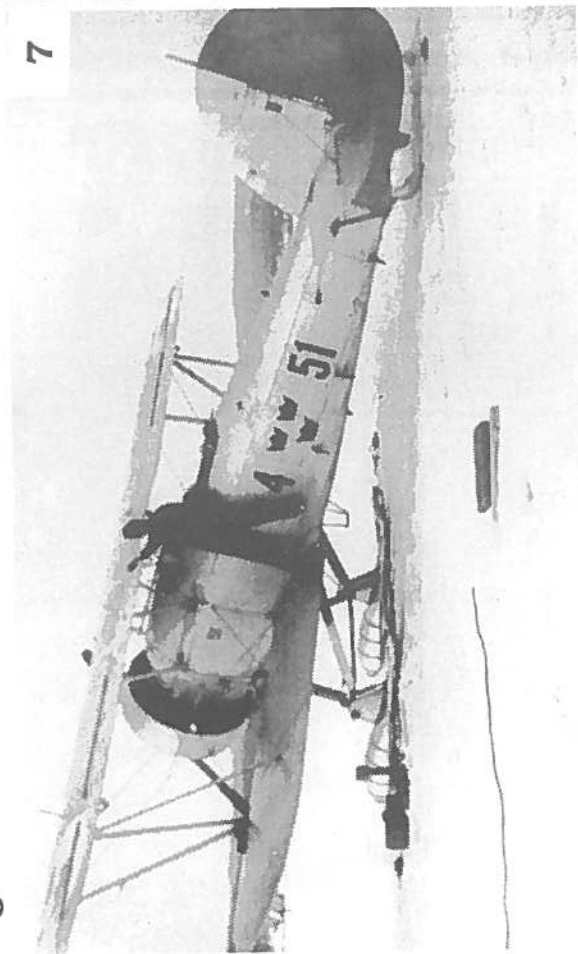
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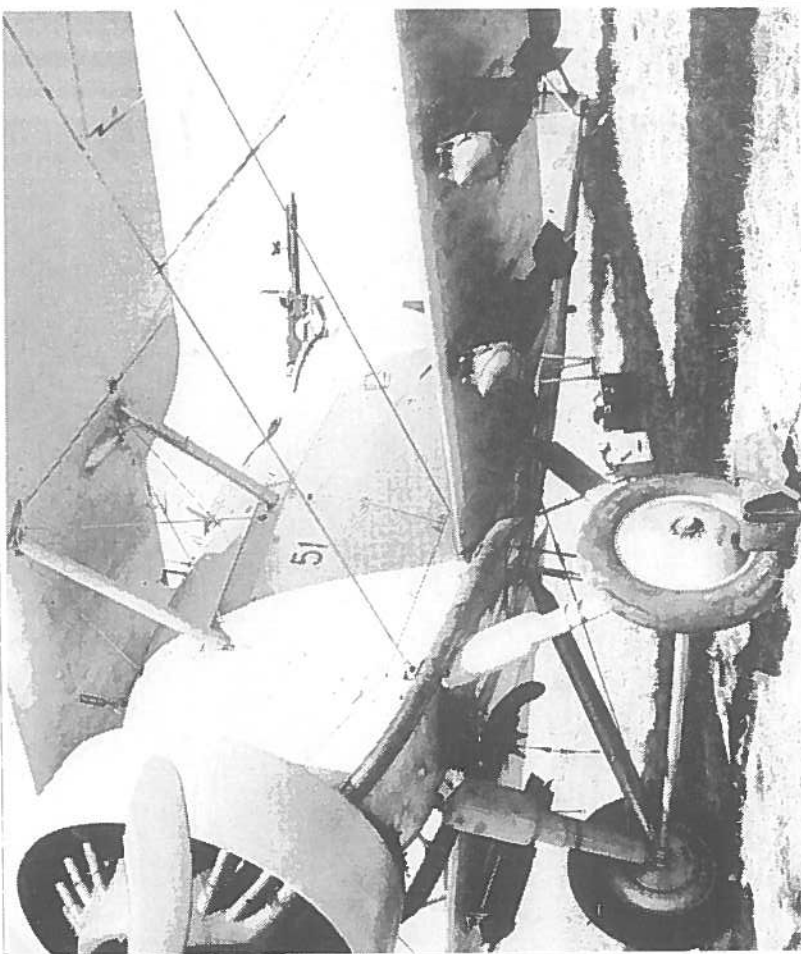
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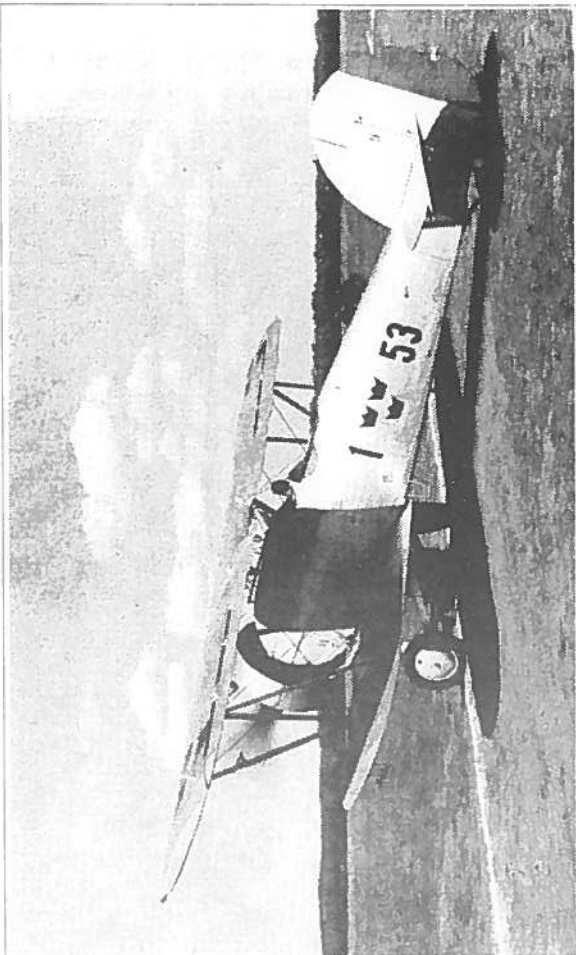
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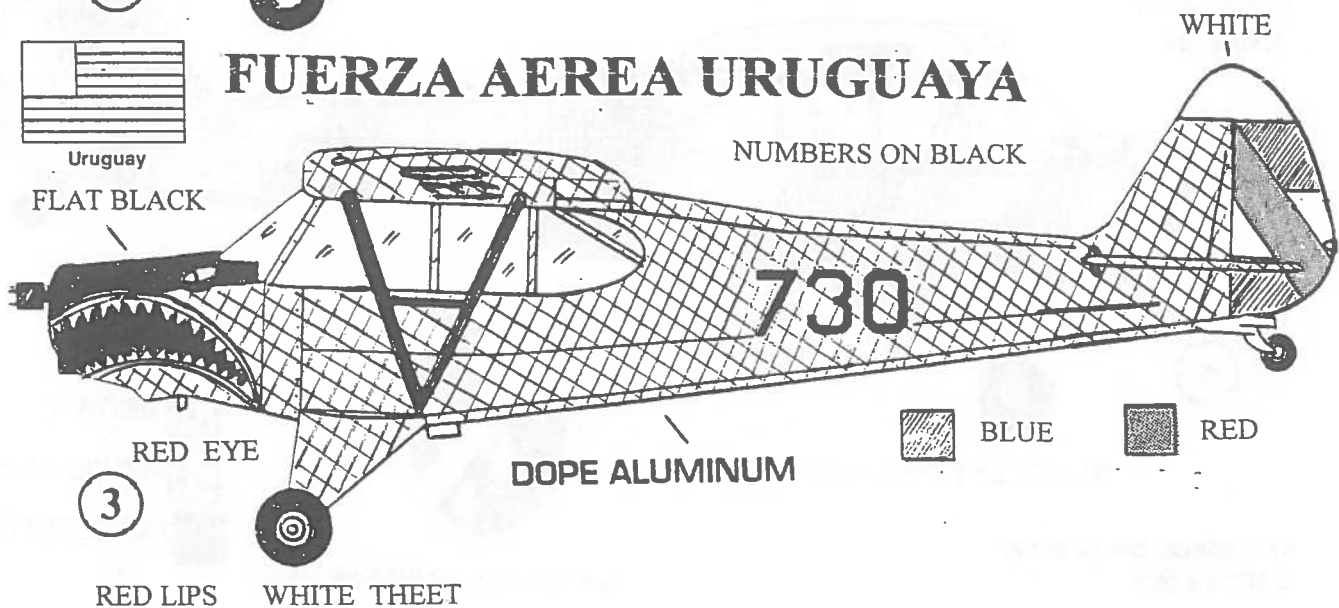
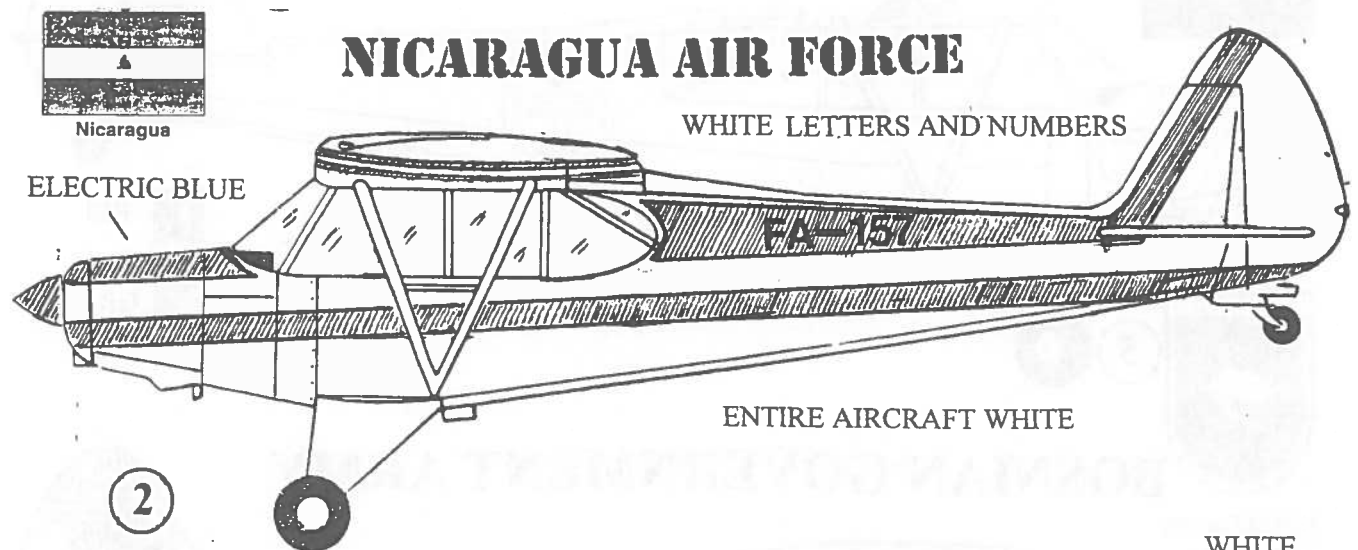
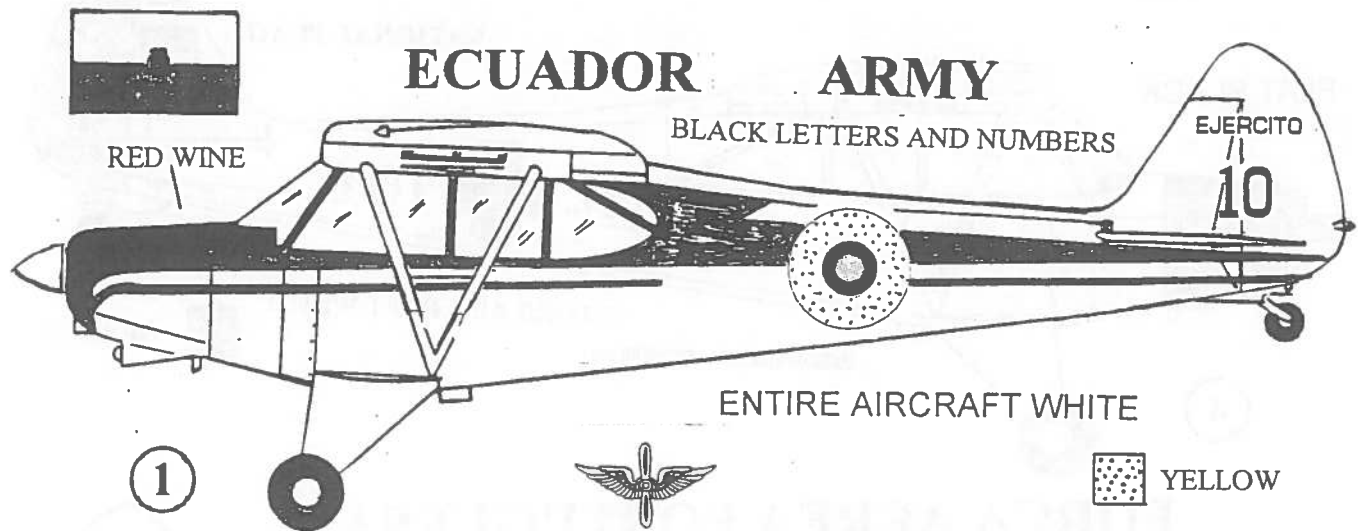


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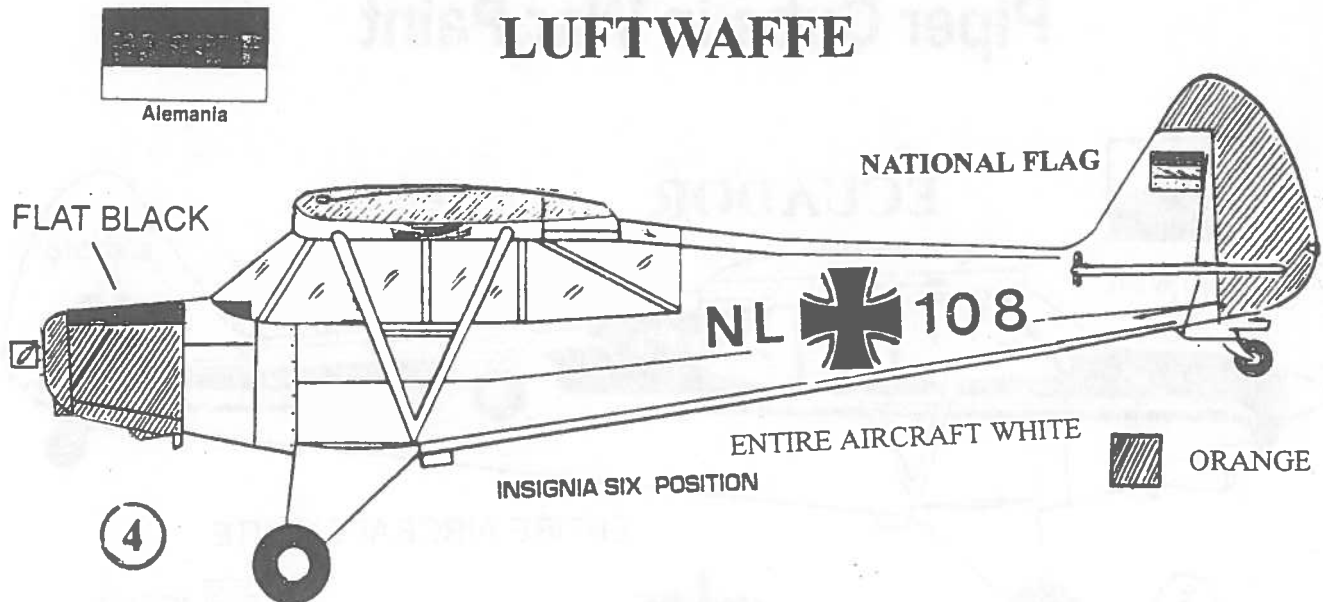


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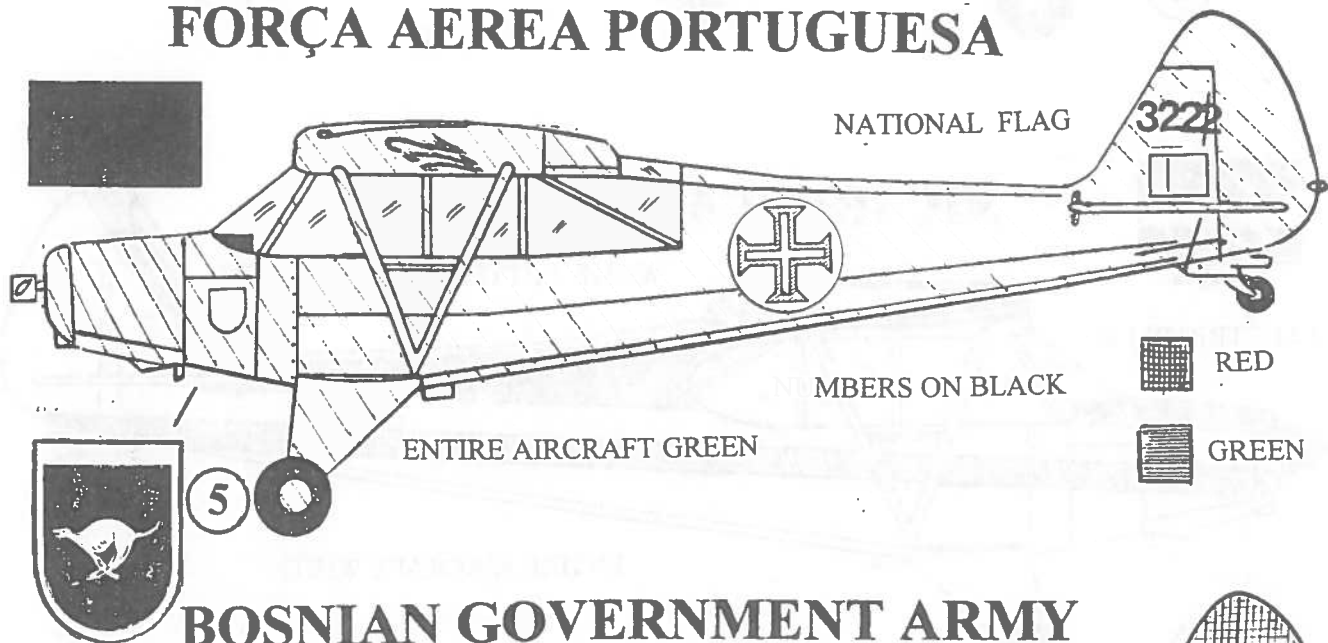
Piper Cubs in War Paint



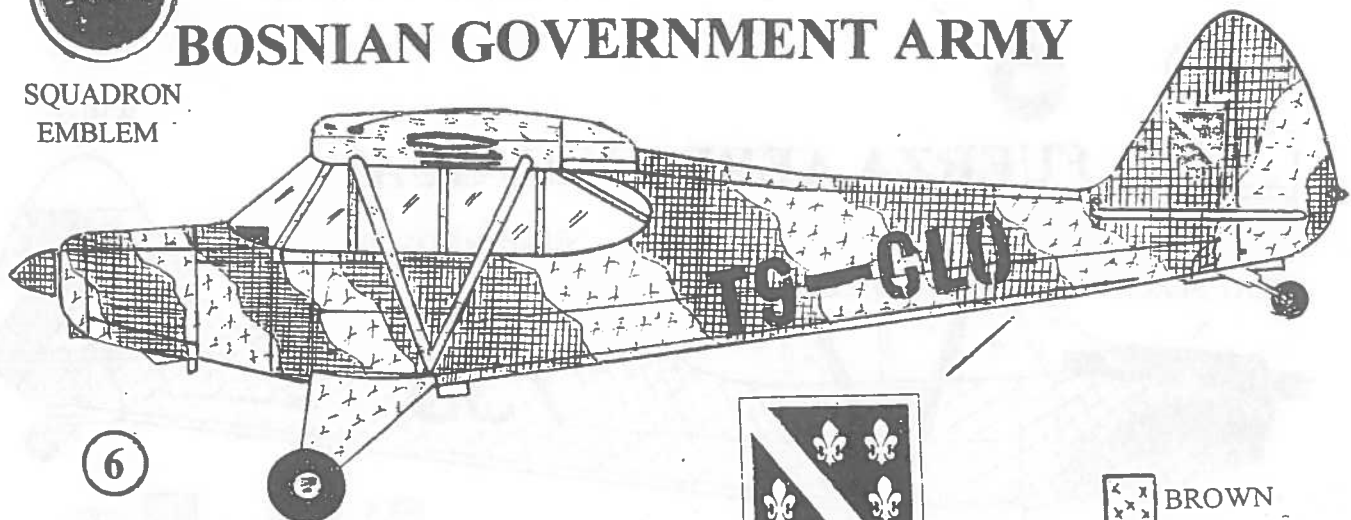
LUFTWAFFE



FORÇA AEREA PORTUGUESA



BOSNIAN GOVERNMENT ARMY



CAP JORGE DELGADO P.
(SAFCH # 862)

Spitfire Italiani, by Gregory Alegi and Marco Gueli. 167 pages, 30 x 21 cm (landscape), hardbound. 157 b/w and 31 colour photos, two colour 3-view drawings, ten b/w and eight colour profiles. Italian text only. Aeronautica Militare, 2003. Price £19.95 from Helion Books.

For those who are prepared to look beyond the titles published in English when seeking books with a small air forces flavour, there are many pleasant surprises to be had. This excellent volume is a case in point, even if the Italian Air Force perhaps is not really a "small air force". The book is published by the Italian Air Force and one can only hope that it is the first in a long series of similar publications. Beginning with the story of a couple of RAF Spitfire Vs captured nearly intact after belly-landings in Italy in 1942, the book continues by describing the use of the Spitfire V by the re-constituted Italian Air Force from the autumn of 1944 until 1948. This part is rounded off by some good drawings, details of technical characteristics and a list of individual aircraft identified to date. The Spitfire IX, in service from 1946 to 1962, then gets a similar treatment. Each Stormo and other unit using the aircraft gets a section with text and photos and there are also a few special sections, for example on experiments with camera installations in aircraft MM.4089 and on deliveries to Israel. Detail sketches, apparently from maintenance manuals, are sprinkled throughout. Some 40 pages follow that are concerned with the restoration of Spitfire MK805/MM.4084 in Italy and with former Italian Spitfires recovered from Israel and Burma.

The last part of the book is taken up by a detailed description of the colour schemes and markings worn by the Spitfires. This is supported by several drawings and a selection of excellent 3-views and profiles of individual aircraft. A couple of the schemes depicted are very eye-catching and would look very nice on a model. It should be noted that all colour photos in the book are of preserved aircraft (plus one belly-landed RAF machine; incidentally the only colour photo of a Malta-based Spitfire I have ever seen).

All in all, a volume which is warmly recommended. The only minor complaint - apart from the total absence of English translations - is the poor state of some of the photos used: no attempt has been made to remove excessive scratches and dust spots, which is quite an easy thing with current technology.

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softbound. 102 b/w and 82 colour photos, one colour 3-view drawing and 17 colour profiles. French and some English text. Editions d Along, BP 54, FR-83490 Le Muy, France. Price Euro 22. Like the Italian Air Force, the French Navy is admittedly slightly out of scope for a SAFO review. This series of small books - which in some ways reminds one of the old Aircam publications - specializes in French aircraft, with the odd volume on other nationalities. The present volume is the first to cover a post-war aircraft, although of course one based on a war-time design. The 94 French F4U-7s were the very last Corsairs built, in 1952-1953, and were intended for French Navy use in Indochina. The French also operated 25 second-hand AU-1s: a special ground attack version of the Corsair which was virtually identical to the F4U-7, except for the lack of a two-stage compressor. Later on, the Corsair saw French service at Suez and in North Africa, the last examples only being retired in 1964.

Like its predecessors, this book has relatively little text: perhaps 20 pages in all, plus a four-page English summary insert. The bulk of the book consists of illustrations of various types: photos, sketches, paintings, drawings and maps. There is a complete set of 1/48-scale plans on two loose inserts. The photos include a nice selection of historical shots (with dual French-English captions) as well as several dozen detail photos in colour of preserved aircraft. One of the high points are the colour profiles by Marchand, which are truly excellent. The French Corsair in Suez stripes have always been a special favourite of mine and the five examples here are magnificent.

Those who have seen some of these "super profiles" in the past will know what to expect and will not be disappointed. Well worth the somewhat steep price.

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Les Avions Britanniques aux Couleurs Françaises, by Jean-Jacques Petit. 256 pages, 22 x 30 cm, hardbound. 552 b/w and 15 colour photos, two colour 3-views and 34 colour profiles. French and some English text. Avia Editions, Quartier Malarais, FR-07400 Rochemaure, France. Price Euro 49.

Even a "French impaired" reader like myself can

work out that this book deals with British aircraft in French colours. In fact, British designs built in France under licence are also included, as are some Canadian and Australian types. The book is divided into five sections, covering different periods, as follows:

World War I (6 pages) deals with four different Sopwith types used by the French forces. One of these, the 1 1/2 Strutter, saw service with no less than 80 escadrilles.

Between the wars (23 pages) covers a variety of mainly civilian types, most of them light aircraft from the de Havilland, Miles and Percival stables. The only military aircraft here is the Short Calcutta, a few of which saw French navy service. There are also a couple of very nice shots of Puss Moths in Free French markings.

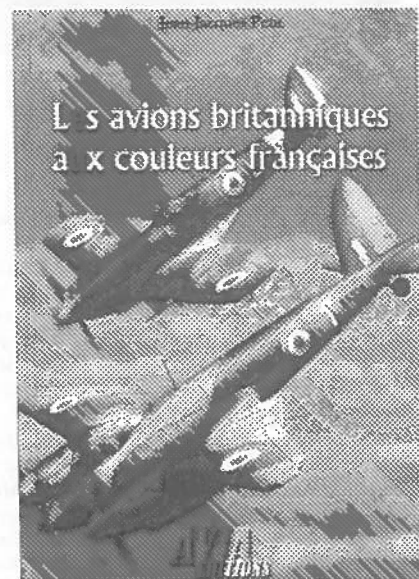
World War II (98 pages) is not surprisingly the longest section. Although the French use of such types as the Spitfire and the Mosquito is well known, others may be more surprising. For example, how many knew that the French had Fairey Barracudas, Avro Yorks and Supermarine Sea Otters in fair numbers during or after the war?

The Post-war period (80 pages) is partly dedicated to early jets such as the Meteor and the Vampire, of which the French had large numbers, and partly to a wide variety of civilian types, both airliners and light aircraft.

Commonwealth aircraft (16 pages) is the final section, with Canadian types from Noorduyn, DHC and Canadair, plus the GAF Nomad.

Each aircraft is given a few paragraphs of text (in French only) plus a varying number of photos, depending on the importance of the type. The photos all have informative and lengthy captions in both French and English. In many cases there is also a table of all individual aircraft. The information in these tables vary, sometimes including service dates and unit details but at other times only some brief comments. The colour photo section is surprisingly bland and the colour profiles seem somewhat random in selection, but include one or two nice examples. My favourite is the overall red Avro Anson.

Again, this may not be a bonafide small air forces tome but it certainly has a small air forces "feel" to it and will no doubt appeal to many SAFO readers. Leif Hellström (SAFCH #786), Norrskensbacken 13, SE-146 46 Tullinge, Sweden.



Les Corsair Français: F4U-7 et AU-1, by Patrick Marchand and Junko Takamori. (No.12 in "Les Ailes de Gloire" series.) 96 pages, 18 x 25 cm,

MiG, Mi, Su & Co.: Sämtliche Militär-Flugzeuge und Hubschrauber der DDR, by Dietrich Banach et al. 190 pages, 17 x 24 cm, hardbound. 198 b/w and four colour photos. German text only. AeroLit, Diepholz, Germany, 2002. Price £16.95 from Midland Counties.

This book is a straight-forward catalogue over all the 2036 aircraft and helicopters of 73 types and versions used by the East German Air Force from 1953 until 1990. There is no narrative, each type being covered by a number of photos and a table. The table provides c/n, year of manufacture, tactical number, TOC date, units having the aircraft on charge, SOC date and fate. The information is surprisingly complete even if some gaps exist here and there. In addition, there are some general comments on tactical numbers, flying unit chronology and information sources, as well as a useful cross-reference list between tactical numbers and type.

The printing is a far cry from the "iron curtain's revenge" style publication of old. The photos are all clear and well reproduced and the paper is of high quality. The lack of English text is not a critical factor in this type of book.

All in all, a rather pleasant publication which should appeal to anyone appreciating fact-filled, no-nonsense type reference works.

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African MiGs: MiGs and Sukhois in Service in Sub Saharan Africa, by Tom Cooper. 158 pages, 21 x 29 cm, softbound. 71 colour profiles. SHI Publications, Semperstrasse 1/5, A-1180 Wien, Austria, 2004. Price Euro 43.

This is the quintessential type of small air forces publication: dealing with an obscure subject, written by an enthusiast and published by a small publisher in a no-frills format. The type of publication that used to be so common in Britain in the 1960s and 1970s (albeit usually in smaller size) but which has all but disappeared today.

Tom Cooper has tackled a very difficult subject, indeed, in trying to sort out the service record of the Soviet desert fighters in sub-Saharan Africa. Chinese-made developments from Soviet designs are also included. The number of countries is astonishing: no less than 19, spread geographically from Eritrea to Namibia, and alphabetically from

Angola to Zimbabwe.

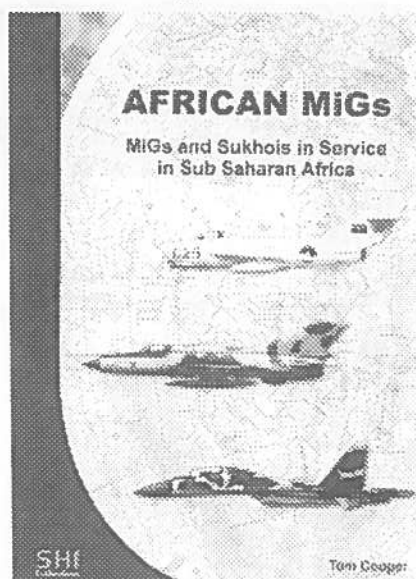
As can be expected, the length of the entries varies considerably. Longest are those for Angola and Ethiopia, each with 20 or so pages. The shortest, such as Burkino Faso, have less than a page of text plus one or two illustrations. Each entry is divided into a number of sections: "Overview", putting the use of the aircraft into a historical perspective; a section called "MiG Fighters in [country name]", which describes the acquisition and service of the aircraft in some detail; and "Known Serials, Markings, and Camouflage Colours", which is rather self-explanatory, and when possible supported by a table of individual aircraft. In some cases, when the necessary information is available, there is also a section named "Operations of MiG Fighters in [country name]", which goes into detail about specific campaigns and even missions.

The text is in the narrative, with no first-hand accounts, and is sometimes surprisingly detailed. The coverage is understandably a bit spotty at times, and the degree of detail can vary considerably even within the same entry. But in general the book gives a very good overall view of the use of the Soviet fighters, and often also of the general development of the air forces concerned.

The single biggest drawback of the book is that there are no photos: none at all. And this is a serious problem for a book of this type, especially one this expensive. The reason, according to the author, are the concerns over copyright. The problem is only partly alleviated by the many excellent colour profiles. I would also have liked to see some kind of source list.

But, these reservations aside, I can recommend this book to anyone with an interest in either Africa or Soviet aircraft. Much of the information is also available on the ACIG site on Internet, at: http://www.acig.org/artman/publish/cat_index_14.shtml

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African

MiGs: MiGs and Sukhois in Service in Sub-Saharan Africa, by Tom Cooper. Published by SHI Publications.

The sub-title says it all. Countries are ordered alphabetically with sub-chapters: "Overview" = "MiG Fighters in", "Serials", "Markings and Camouflage", and "Operations". According to the

level of information available, the length of these sections vary considerably. Where appropriate, table of losses, victories, and units are included, but no photos can be found in the whole book! Instead, we get some nice color side profiles of the aircraft with comments. No plan views are provided, so the modeler need to find further sources of information. Nevertheless, this book is a real treasure for Small Air Force fans. I obtained my copy direct from the publisher in Vienna. Try his web site: publications@skyhawk-international.aero.

Nils Treichel (SAFCF #1467), Grosser Platz 4, 27432 Brenneroerde, Germany. nrtreichel@vr-web.de

Triple Crown BT-9: The ASJA/SAAB Sk 14: A Pictorial Essay, by Doug MacPhail and Mikael Östberg. 130 pages, 18 x 25 cm, softbound. 102 b/w and two colour photos, six colour profiles. English and some Swedish text. Published privately, 2003. Price around \$25 from author at airbooks@sympatico.ca

Another enthusiast production, this time relying mainly on photographs to convey the story. The Sk 14 was a Swedish licence built version of the North American NA-16, equivalent to the USAAC BT-9 (think fabric-covered T-6 with fixed undercarriage). It was the standard RSwAF secondary trainer from 1939 to 1947, a few remaining in service until 1952 as hacks. Three were rebuilt to a unique nose-gear configuration for tests in connection with the SAAB J 21 fighter development.

There are only some 20 pages of English text, plus a 13-page Swedish summary (surely the fullest "summary" ever!), the rest of the book being taken up by photos (typically two per page), including many detail shots, as well as a complete set of 1/72 drawings, various sketches and a table of the 113 individual aircraft. Special consideration is given to the modeller and there is much information on painting and markings. A description is also included of the 20+ year rebuild of a Yale and a Wirraway into an Sk 14 replica, only completed last year.

The price is a bit on the high side for what you get but other than that I can warmly recommend this little book to all SAFO readers.

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Fredsflygarna: FN-flyget i Kongo 1960-1964, by Leif Hellström. 2003, Freddy Stenboms Förlag, Box 90133, S-120 21 Stockholm, Sweden (information on availability and price, shipping available from the author at leif@leifhellstrom.com. 360 pages, hardcover, many color and black-and-white illustrations.

My friend and frequent collaborator, Leif Hellström, has produced yet another outstanding contribution to aviation history. This time, following a thread established during the preparation of our joint project, *Foreign Invaders* some years ago, he has recorded the complete history of United Nations and opposition aviation activities during the tragic period in the Congo between 1960 and 1964.

Although the text is completely in Swedish (Leif is seeking a U.S. or British publisher to produce an English-language version), the photos and captions are worth the price of admission alone. Starting with a spectacular full color cover, showing a camouflaged Swedish/UN SAAB J 29 and a camouflaged Katangese North American Harvard at close quarters, the illustrations that Leif has located and documented are little short of astonishing.

His narrative begins with a history of the Congo and the events that brought the world to the events of 1960-1964, and he has included maps which explain the confusing partitions and secessions. The second chapter is devoted to the Belgian Air Force activities in their former colony. Subsequent chapters document the arrival of the first increments of UN aviation elements in the Congo (which includes a wonderful photo of a Royal Norwegian Air Force C-119 with nose art!) as well as UN marked C-119s, Piper PA-18 Super Cubs, de Havilland (Canada) Otters, DC-3s, DC-4s and the arrival of Swedish SAAB J 29Bs. There is also a chapter devoted entirely to the substantial U.S. Army aviation contingent deployed to the Congo. It is hard to know

what to point to amongst the plethora of spectacular images in the book. A color photo on page 222 of North American F-86's of the Imperial Iranian Air Force's 103rd Fighter Squadron, sporting a combination of IIAF and UN livery certainly caught my eye, as did the ground-breaking sections devoted to the very poorly documented Katangese Air Force. A color photo of a Congolese Harvard in flight on page 238, marked with the skewed star national insignia as 9TP35 took my breath away. This book is precisely the sort of work that SAFO and its membership should support, and I urge anyone interested in adding a very special book to their library to contact Leif before they are collectors items!

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BEECH 18: A Civil & Military History, by Robert K. Parmerter (Twin Beech 18 Society, Box 550, Tullahoma, TN 37388, ISBN 0-9748312-0-4, about \$70 plus shipping & handling).

Here is a truly beautiful book, featuring an aircraft

series that has always been one of my all-time favorites - and clearly is the favorite of Bob Parmerter, who has labored for more than 30 years to assemble what is clearly a labor of love. The solitary failing of this magnificent book is that it makes your arms tired holding it while you devour the contents, it is so heavy with no fewer than 567 pages of hard-bound, high-quality paper.

This book is the envy of any aviation historian who would like to truly do it right. In 11 chronological chapters, Bob marches through the evolution of the design in an exceptionally orderly manner - not least of which is the final chapter, in which the modifications to the basic design by not less than 70 companies are once-and-for-all sorted out. But the end of Chapter 11 only takes us to Page 433. Bob then includes no fewer than 23 Appendices (A thru W) in which such things as Film Appearances, Color Paint Charts, Data Plate Locations, Floatplane and Ski Installations, and a host of other pertinent data are concisely and logically presented.

The mix of color and black and white photos in the book are nothing less than stunning, and the reproduction is invariably superior. There seems to be something for everyone.

Bob has given us some amazing facts surrounding this remarkable aircraft series. He states that "...the Model 18 is the most modified aircraft in history...", and this book surely supports that contention.

This book deserves your support. A bit expensive, yes, but for the price of taking five folks out to a family restaurant, you can have forever a testament to one of the greatest aircraft of the first 100 years of manned flight.

Dan Hagedorn (SAFCH #394), 13125 Pennerview Lane, Fairfax, VA 22033, USA. hagedornd@nasm.si.edu

BATAILLES AERIENNE, Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. E-Mail: Lela.presse@wanadoo.fr. Web Site: www.avionsbateaux.com. Four issues 32 Euros.

Les débarquement: Combats Aériens, Première partie. Batailles Aérienne #28.

Nothing of small-air-force interest in this story of the aerial activities over the Normandy Beachhead. Only the usual high quality Batailles Aeriennes presentation consisting of intelligently selected and superbly reproduced photos, informative maps, and beautiful color side-view drawings. The text covers the aerial activities on both sides from the initial landings on 6 June 1944 through the night of 12-13 June. Color side-view drawings are: Bf 109G-6 (2), P-38J Lightning (2), Typhoon Mk III (2), Spitfire LF IX (2 - one 'NN-M of 310 Czech Squadron), and Fw 190A-8. "Uniformes et tenues de vol" presents color drawings of ten Luftwaffe

BATAILLES AERIENNE

airmen in uniform. The "Le coin du maquettiste" covers the Revell 1/48-scale Focke-Wulf 190 A-8/R-8/G-8 including 5 color photos on the finished model.

Batailles Aeriennes's "Les débarquement: Combats Aériens" is an excellent source for information on the Normandy invasion and the participating aircraft. As usual, highly recommended for its scholarly research and its superb illustrative material.

Les débarquement: Combats Aériens, Seconde partie. Batailles Aérienne #29

Again, nothing of small-air-force interest in this story of the aerial activities over the Normandy Beachhead. Only the usual high quality Batailles Aeriennes presentation consisting of intelligently selected and superbly reproduced photos, informative maps, and beautiful color side-view drawings.

The text of this part covers the aerial activities on both sides from 13 June to 30 June, with separate chapters devoted to each dates day-time and night-time activities. The 16 color profiles consists of: Spitfires (2), Mustangs (4), Lightnings (2), Swordfish, Walrus, Bf 109, Fw 190, and Thunderbolts (4). "Uniformes et tenues de vol" presents 9 color drawings of USAAF airmen in uniform. The 3-page modeling section's "Spitfire Mk IXc 'Clostermann'" includes 4 color photos of the finished 1/48-scale Hasegawa model.

Batailles Aeriennes's "Les débarquement: Combats Aériens: Seconde partie" is an excellent source for information on the Normandy invasion and the participating aircraft. As usual, highly recommended for its scholarly research and its superb illustrative material.

Enciclopedia de la Aviación Militar Española

Quirón Ediciones, C/Cromo P. 18-20, Polígono Industrial San Cristóbal, 47012 Valladolid, Spain. E-Mail: quiron@quironediciones.com. Web Site: www.quironediciones.com. Each 2.97 Euros.

#81 (pages 1297-1308) "Breguet 14 A.2" 12 pages including 19 photos and 4 color side-view drawings. Poster inserts: "Casa 2.111H: Avion BR.21-13 (462-

01) del Ala Mixta N° 46 de Gando" and "North American F.86F: Avion C-5-91 (98-091) del 98° Escuadron del Cuartel General del mando de la Defensa".

#82 (pages 1309-1324) "Breguet 14 A.2" (continuation) 16 pages including 24 photos, 2 color side-view drawings, a 2-page color 3-view drawing, and

a 2-page table listing individual a/c.

Poster inserts: "Bleriot Spad S.91/6: Avion del Grupo de Caza de la Aviación republicana (Alcala de Henares)" and "Fieseler Fi 156: Avion 96-1".

"When I received the July issue of 2004 (109) I was shock to read that my dear friend Antonio Linhares past away this March. For many years we have exchange aviation material. We meet for the first time in 1990 during a business trip I made to the city of Rio de Janeiro. In spite of the distance and the age difference, our friendship grew stronger in the years to come. In September of 2002, we meet for the second and last time. In spite of my tight agenda, we manage to have a spare moment to visit the Aeronautical Museo at Dos Afonsos. We were photographed together at the souvenir stand. "Many people met him through letters and e-mails. His enthusiasm for airplanes was so enormous it was contagious to modelers all over Latin America. His contribution to the SAFO movement will be missed."

Jorge Delgado (SAFCH #862), PO Box 2207 - URDESA, Guayaquil, Ecuador. jdelgado@ipse.net.

"I'm writing to tell you how great the SAFO 'network' works: In response to my request for information, published in SAFO #109, about the Australian Westland Scout helicopter, Davis Loughhead sent me a letter from Australia. Besides the information I needed, he included a decal sheet for this chopper! It's really great to belong to such an organization."

Nils Treichel (SAFCH #1467), Grosser Platz 4, 27432 Bremervoerde, Germany. nrtreichel@vr-web.de

"I particularly liked the article on International Autogiros in SAFO #108. May I add a further snippet of information concerning the Swedish C.30s, taken from the book 'Svensk Flygvapnet - Propellerepoken'. Here it is said that SE-AEA was pressed into military service as a transport plane(!) from November 1941 until November 1942, serving with Flygflotilj F3 based at Malmen."

Nils Treichel (SAFCF #1467), Grosser Platz 4, 27432 Brennervoerde, Germany. nrtreichel@vr-web.de

"The article in SAFO #109 about the Cierva C.30A is reason for some remarks concerning their Dutch

use: The type was never ordered for the Dutch LVA. However, on 30 April 1936, a contract was signed between the Director of the LVB (Air Force Workshops) and NV Autogiro Import making a Cierva C.30 available for testing by the LVA until 1 August with res.kpt. N.M. Schmidt Crans as the pilot. When PH-HHH crashed near Soesterberg (military) airfield on 7 July 1936, the crew consisted of Schmidt Crans and res.lt. Benus (not Benes).

"On 5 March 1937, the IML (Inspecteur der Militaire Luchtvaart) reported to the MoD advising continued testing and the training of some pilots on autogiros. He concluded the type could perform a number of important tasks, provided enemy fighter could be avoided. In fact, PH-HHH twice had mock dogfights with a Fokker C.5 (with gun camera) and the autogiro proved to be absolutely defenseless. Another reason for the decision not to acquire an autogiro was the lack of funds.

"The above data is from the MoD archive. Since Mr. Ledet mentioned 8 July as the crash date and the name of the passenger as Benes, I must conclude that he used as source an article by H.J. Hazewinkel in Aero Journal nr. 1-1996. This article was written some years before I obtained the archive documents with the above information."

Frits Gerdessen (SAFCH #12), Fijnscheerderstraat 12, NL-4204 ES Gorinchem, Netherlands.

"For the article on the Cierva C.30 (SAFO #108), your sister in her (otherwise excellent) translation decided to leave the naval ranks unchanged for the Spanish section. This is not strictly correct, as those ranks are in French in Michel Ledet's original and thus remain in French in the middle of an English-language text on Spain. I would suggest translating these to English naval ranks. Capitaine de Corvette = Lieutenant Commander and Lieutenant de Vaisseau = Lieutenant. The other option would be to translate back to Spanish were: Capitaine de Corvette = Capitan de Corbeta and Lieutenant de Vaisseau = Teniente de Navio. Similarly, chef d'etat-major is chief of staff."

Kai Willadsen (SAFO #863), Sankt Jorgensgade 16, 4200 Slagelse, Denmark. kai.willadsen@cec.eu.int

"Since 21 July 2004, the Aeronautical Museum (Uruguay) has counted among its exhibits the legendary Wessex HC Mk2 - Uruguayan Air Force '071' (ex-RAF XR522). The condition is excellent and it is virtually complete. The paint job shows the wear accumulated in service and the British markings are covered by Uruguayan national markings. "In addition, the 70-hp Castailbert has been returned to the exhibition hall, thanks in part to the efforts of mechanics at Melilla AFB (Montevideo), and completed by museum personnel. It is being exhibited without its fabric covering so the construction details may be appreciated. The fabric will be added at some future time."

Eduardo Luzardo (SAFCH #1383), Picardia M.267 S.37, 91001 Barros Blancos, R.8 Km 22,500, Uruguay. charrua156@hotmail.com

[Ed: A new member, Gorm Orsted Johansen, responded to my request for information on aviation in Greenland with the following.]

"Regarding flying in Greenland, I can inform you, that we have a little museum up here and some of it is about flying. There is a display about Hassell and Kramer, who were supposed to land here in 1928, but navigated wrong, ran out of fuel, and had to land on 'Sugartoppen' Icecap; they walked from there for 14 days and were picked up by a boat in Sondrestromfjord. We also have an exhibition about Lindbergh's flying in Greenland, in 1933, when they flew from the US via Canada, Greenland, Iceland, Faroe Island, Denmark to Moscow, from there down through Europe and via Caribbean and South America back to the states. They crossed the Icecap twice and ended up where they were supposed to, quite impressive, just with a compass. Another exhibition is about SAS and their routes from Denmark to the States via the North Pole which started in the fifties. Also represented is Greenlandair and flying through Greenland during World War II. I have personally been together with some retired officers from the RDAF putting up those exhibitions and one of them was a pilot flying Catalinas and C-54 on Greenland."

Gorm Orsted Johansen (SAFCH #1673)

-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-

"I have a bunch of aviation magazines I want to get rid of: Air Pictorial (1958-71) hard cover bound; Journal of Military Aviation Vol 1 & 2 hc bound; RAF Flying Review (1963-67) hc bound; Air Enthusiast Qtrly Vols 1-49 hc bound; and Air International Vols 1-24 hc bound. If you're interested, contact me."

Dick Vartabedian (SAFCH #626), 5470 Chanto Dr., Clarkston, MI 48346, USA. dvston@yahoo.com

"I'm Seeking information on Japanese aircraft that served in North Korea from 1945-55, including Ki-67s, Tabbys, Ki-43IIs, Ki-55s, Ki-54s, Ki-57s, and any other Japanese aircraft that were located in North Korea during this time period. Please e-mail

me or respond by snail mail."

Gus Euripides, 4508 Willow Croft Court, Charlotte, NC 28226. geuripides@yahoo.com

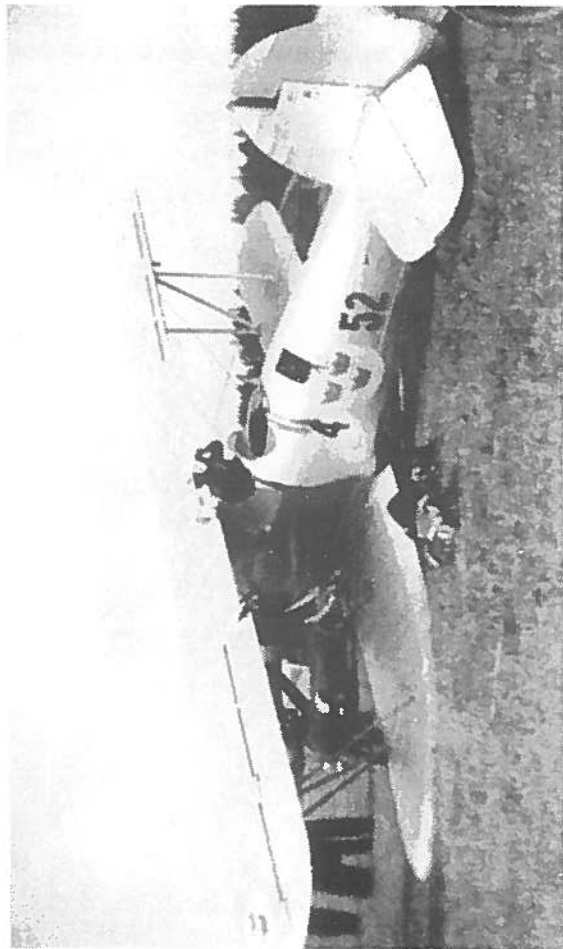
"While speaking with a friend, we recalled an order we sent years ago to IPMS USA for their photo-etched parts (mainly airbrakes) for the 1/72 scale kit of the Curtiss SB2C Helldiver. Unluckily, it was at the time they stopped production. Now, at long last, I've returned to my dream of building a series of Helldiver (with the correct dive brakes) including French, Italian, Thai, and a few US aircraft. Do you know any source for 'photo-etched' dive brakes for 1/72-scale Helldivers? Any suggestion of website where I may contact modelers who may have some for sale?"

Hubert Cance (SAFCH #809), 56 Bd. E. Lintilhac, 15000 Aurillac, France. hubert.cance@wanadoo.fr

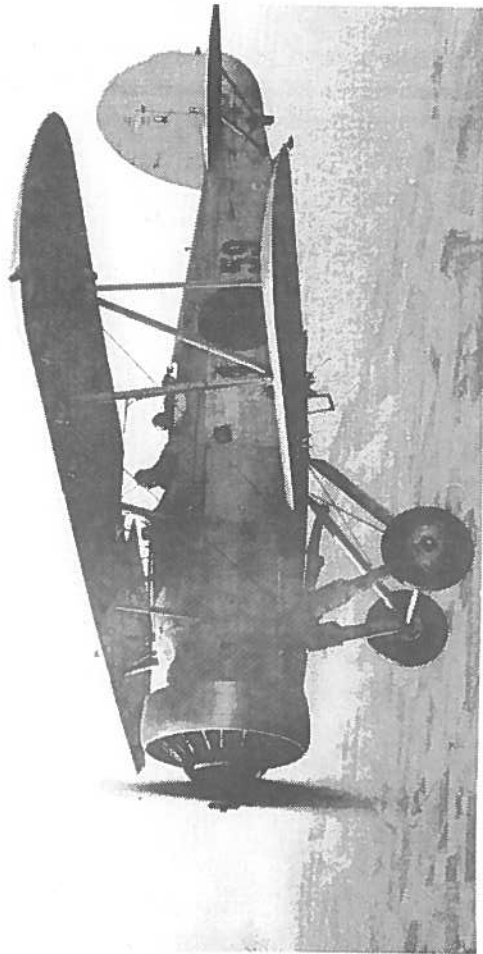
"I've been asked whether I've ever heard of any Yugoslav Bf 109Gs being sold to the Israelis in the early 1950s. I haven't, have you? I think someone somewhere got confused because of the Jumo-engine Bf 109G airframes the Czechs sold to the Israelis as Avia S-199s in 1948."

Sid Napier (SAFCH #1521), Burgstrasse 2, CH-Ettingen, Switzerland, snapier@freesurf.ch

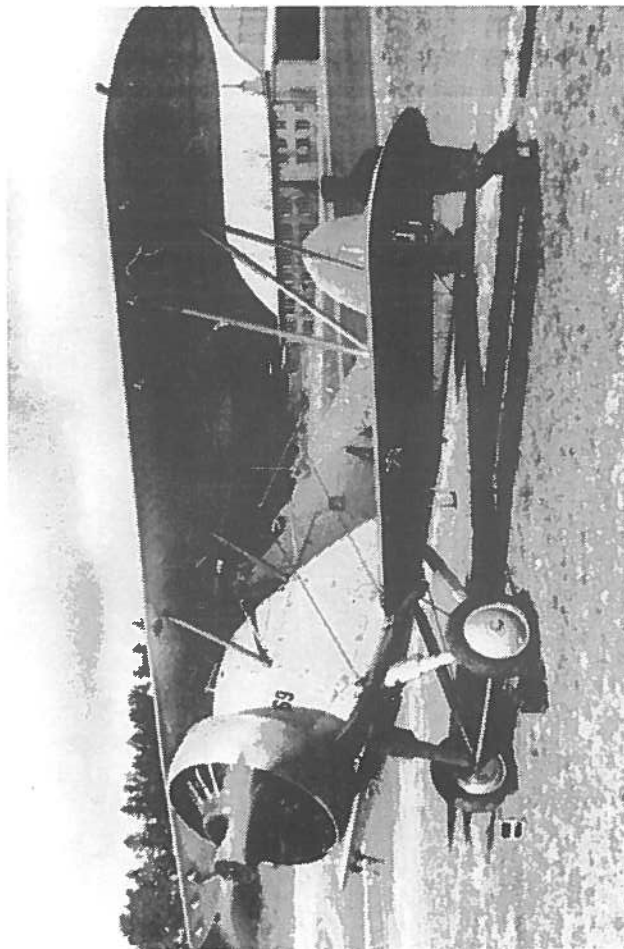
[Ed: I agree with Sid that it is unlikely that any Bf 109Gs found their way to Israel. However, if any readers have information to the contrary, we'd like to hear about it.]



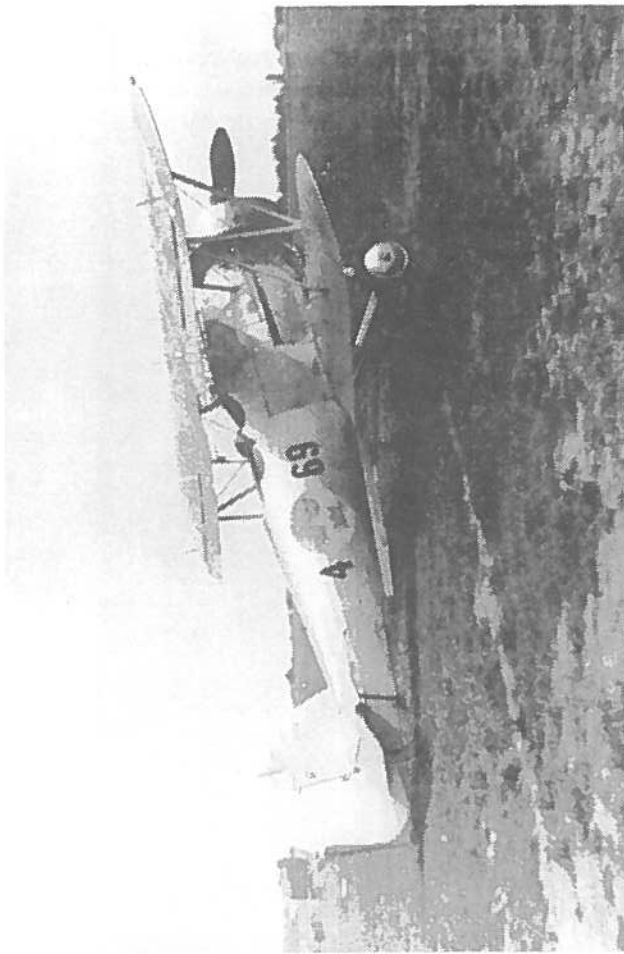
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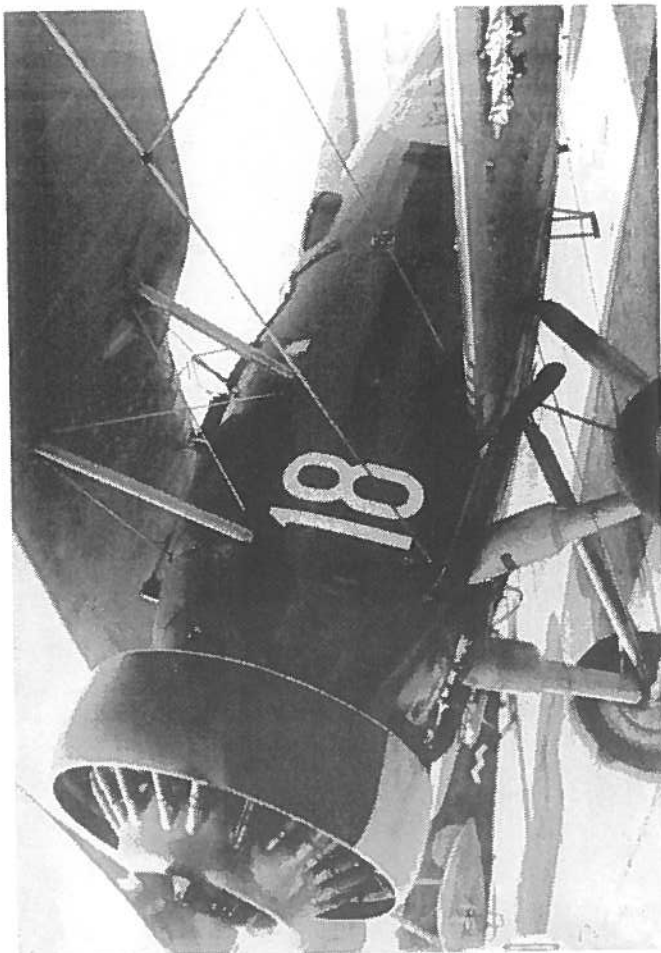
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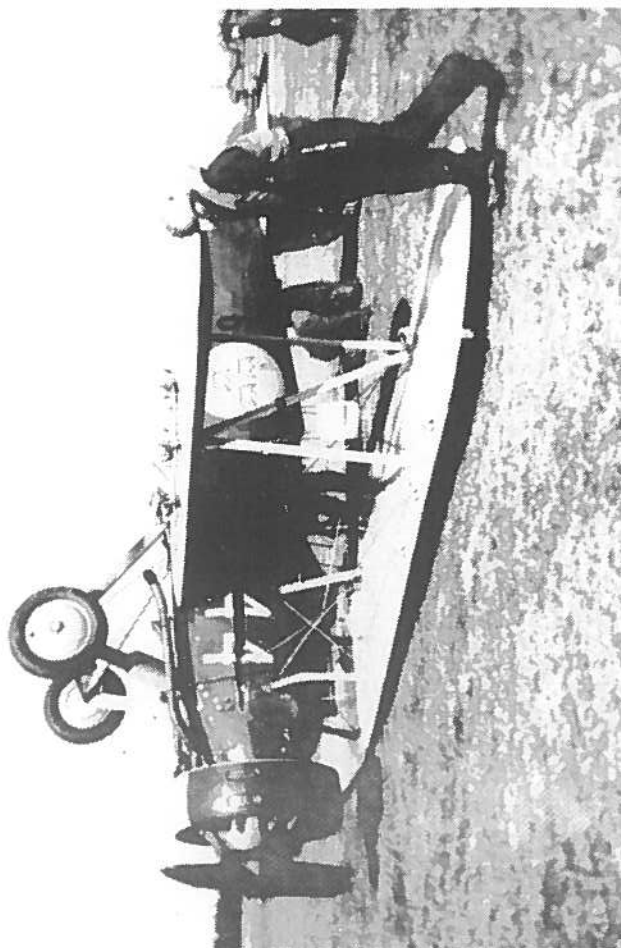
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